axcess.io

EDOFOX

CASE STUDY

Seamless Infra Migration to AWS

The project successfully migrated the Production Infra. of Edofox from Linode to AWS, helping them attain a highly available and scalable Infra.

ABOUT AXCESS.IO

We offer Cloud Managed Services and DevOps Automation to improve agility and velocity of your business.
We are s a cloud-native services company with clients in multiple geographies and industries. We specialize in cloud transformation, DevOps automation, managed services and cloud-native application development. With offices in USA and India, we empower organizations to transform and secure their IT infrastructure, scale up their operations, and manage customer workloads from our ISO 27000-certified Global Network Operations Centers (GNOC).

About Edofox

Edofox is a leading software for conducting online examinations.

With their value-based approach and the ability to drive innovations, Edofox has become one of the most efficient EdTech brands in the tech-driven environment of India. Their product contributes value to the online education ecosystem. Their service includes online assessment platforms, learning management system (LMS), and business/ institution management platform.

THE CHALLENGE

Edofox's infra. was hosted on Linode Platform and they faced the following challenges:-

- The application serves would not seamlessly scale horizontally during peak hours
- Disruptions in the availability of applications.
- The databases on the platform couldn't scale appropriately, and creating data backups was also challenging

- The infra. faced random network-level security attacks
- The company couldn't appropriately orchestrate centralized application logging and monitoring
- They were lost in terms of securely migrating the entire Infra. (apps, database and object store data) to AWS

THE SOLUTION

- Axcess holistically helped Edofox in seamlessly migrating their Infra. to AWS to setup a scalable, highly available infra on AWS.
- On AWS, Axcess created a three-tier architecture by maintaining the high availability of Edofox's applications among all three availability zones (see figure.) The solution leveraged Auto Scaling Groups for Automatic Horizontal Scaling of Application Servers with Application Load Balancer. The Amazon Certificate Manager verifies all HTTPS requests.
- In terms of the Database Solution, Axcess deployed the RDS Aurora for MySQL in Multi-AZ for better performance, scalability, high availability, automated backup, and auto failover.
- For Centralized Logging and Monitoring, Axcess used CloudWatch Logs for all application logs, with custom retention period and custom log-based alerts.

- For Applications to provide Public URL to documents stored in S3 with limited read only access for requests generated from Edofox Domain only, Axcess configured the CloudFront (CDN) with S3 with OAI for securing read-only access to Documents in S3 using IAM role.
- To Protect the application from random network attacks, the company used Web Application Firewall, which protects from network attack and provides visualization of all incoming requests to the application servers from the internet.
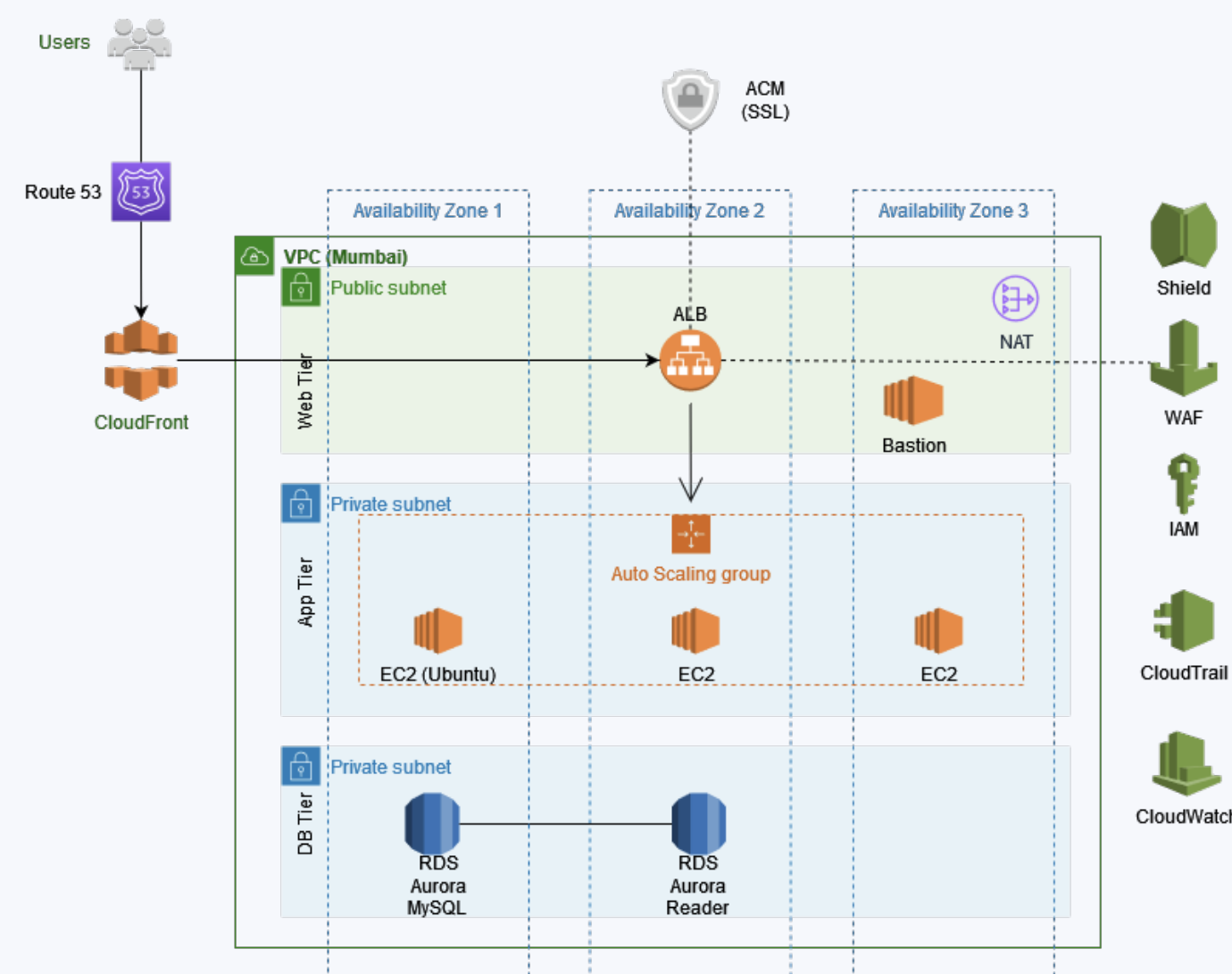
THE BENEFITS

Scaling at ease

- Easily horizontal scaling of application servers
- Easily vertical scaling via with RDS Aroura for MySQL.
- Seamless storage autoscaling.

Reduced Infra. Management Overhead

- Edofox need not worry about manually scaling the application servers during peak hours.

Security

- Protection against DDOS attacks and common web exploits using Shield and WAF
- A more secured infra. as the architecture provides no direct public access to servers and databases.