

About Customer

Digit Insurance is a leading insurance startup from India. Backed by Fairfax Group of Canada, Digit Insurance is aiming to be a customer friendly insurance company and deliver intelligent services with the help of big data analytics and artificial intelligence.

Problem Statement

GoDigit wanted to migrate one of their core insurance application called Allianz Business Systems (ABS) from Azure to AWS as they realized they wanted quicker scaling to accommodate their growth. They have created the microservices for the NON-ABS insurance applications, which they want to containerize and deploy on Kubernetes cluster on AWS.

Proposed Solution

- Powerup Architects worked closely with the Digit team to do a detailed Application Discovery of the current Azure environment.
- Based on the data collected a blueprint architecture was designed mapping the current environment to AWS services following the 6 R's of Migration. A detailed TCO analysis was also done so that the customer is clearly aware about the benefits of moving to AWS cloud.
- Multiple AWS Accounts were created for Dev, UAT & Production.
- Multiple VPC's were created
- Proper Load Testing was done to finalize the sizing for the application servers.
- ABS application servers were lifted and shifted to AWS EC2.
- Auto-scaling is enabled for the application to scale based on load.
- Application Load Balancer is used to distribute traffic.
- Replication was enabled between AWS and Azure to replicate IBM DB2 database.
- Microsoft AD is used for authentication
- Docker Images are stored in ECR.
- Entire CI/CD pipeline was automated used Jenkins.
- Kubernetes Cluster was created with 3 Masters and multiple worker nodes for high availability to host the Non-ABS application Docker images.

- Auto-scaling is enabled on the Master and Worker nodes. Service level scaling is also enabled for the pods to scale within the K8 cluster.
- PostgreSQL database was hosted on RDS with multi-AZ enabled for HA. Multiple Read Replicas are also created for better performance.
- All sensitive data is encrypted using KMS.
- S3 was used to store all the insurance policy and other static contents.
- Indusface was used for WAF
- TrendMicro Deep Security was used as the IDS/IPS tool.

Outcomes

Digit was able to successfully migrate the ABS application from Azure to AWS fully complying with IRDAI regulations (GoDigit obtained IRDAI certification #158 as a result). The Agent portal application was successfully able to handle 20,000+ transactions per day. Digit was successfully migrated from LDAP server to Managed AD on AWS which resulted in fewer down times and at least 5x application performance.

AWS Services used

- EC2 – to host all application servers, Kubernetes infrastructure and management servers
- EBS – storage for EC2
- VPC – to create the required isolated networks on AWS
- S3 – to store the policy documents and other static contents
- IAM – for identity and access management
- KMS – for encryption
- Classic & App Load balancer – to distribute traffic
- Config – for change management
- Cloudtrail – to capture all API activities in Account
- Cloudwatch – for monitoring
- RDS – to host the PostgreSQL database
- NAT gateway – for internet access to private servers