Title: Application modernization and migration to cloud
Client: Top 3 Telecom Provider in US
Location: Irving, TX
Industry: Telecommunications
Duration: 6 Months

Challenges

The application targeted for migration is business critical application used for corporate operations for ticketing and service management. Application has several third-party integrations and handles critical transactions. The complex system required to have zero downtime to handle huge amount of transactions

Some of the key challenges associated with this transformation were:
- Complex application with hundreds of integrations including third-party and in house systems
- Business Critical system with high data privacy requirements
- Shared infrastructure and services like Databases create challenge to decouple the system
- Heavy data flow between applications create challenge for data migration with zero downtime

Along with above challenges, customer goal is to improve overall performance of application by
- Breaking down monolith applications into microservices to have minimal app server footprint
- Rearchitect the applications to minimize infrastructure sharing and improve overall performance by containerizing the applications

Application decided to have same Databases on the target machine and use EKS as containerized platform.

Key Specs

Migration Type: Rearchitect / Modernize
Technology Stack: Java/J2EE, Oracle, Oracle WebLogic, WebLogic BI
Modernization Method: Monolithic to Microservices, Re-platform some of the jobs
AWS Services Utilized: EKS, EC2, Lambda, Elastic Load Balancer, EBS, S3 Buckets, CloudWatch, VPC, IAM
Timeline: Mar 2020 to Oct 2020

How did Matilda help?

Matilda executed the complete migration journey in following phases

- **Discovery:** Matilda Discovery helped to completely assess existing infrastructure and provide infrastructure, services and application dependency
- **Assessment:** Matilda provided detailed assessment at infrastructure and application level with the cost and risk involved in migration process including target architecture
- **Migration Planning:** Migration planning involves
    - automated recommendation engine for target architecture design including security configurations and optimized resource allocation
    - Providing wave/group planning of applications by logically grouping the applications based on network and data transfer dependencies
- **Migration Execution:** Migration process included redesign of application to move to AWS EKS cluster. Application was broken into few microservices, and application deployment was setup through Helm Charts. Infrastructure provisioning including EKS cluster, and Security configurations are provisioned automatically with Matilda migrate platform. Application deployment and validation process is streamlined to reduce manual work and overall performance.

- **Monitoring Setup:**
    - Matilda was able to setup automatically the required monitoring configurations for applications like CloudWatch setup and routing application logs to S3 buckets
    - Installing required agents at host, service and database layers

Business Value
- Application was migrated to AWS EKS cluster
- Seamless data migration to RDS
- Matilda was able to execute complete application landscape analysis in less than 8 weeks with fully automated mode
- Overall manual effort during migration is reduced by 70%
- Matilda workflow was easily integrated with existing process for automated approval and notification systems