CLOUD LOGICX

Crafting Tomorrow, Today!

Client Case Study: AWS Infrastructure Re-design

The Challenge!

A SaaS-based on-prem CRM solution was migrated to AWS by an in-house development team using a lift-and-shift approach. However, inherent issues related to Availability, Security, and Scalability persisted due to the monolith architecture of the application, hindering optimised cloud adoption, resulting in a negative customer experience.

Tasks:

- Review the design and make recommendations to improve the availability, reliability and security of the system as a whole.

- Work with the internal development team to implement the necessary changes to enhance the customer experience.

- Adhere to the client's monthly budget.

Pre-engagement Infrastructure Summary

- Application was deployed as a monolith with all services deployed on a single server.

- Load balancing was accomplished by deploying multiple independent instances of the application, utilizing Route 53 for traffic distribution across multiple servers.

- Database was hosted on a separate EC2 instance.

- Application was linked to the DB by hardcoding the DB IP.

- Only basic security controls were in place.

- There was no backup policy in place.

- No formal logging and audit policy in place.

- Only basic AWS monitoring was in place.

# Pre-engagement Infrastructure Diagram
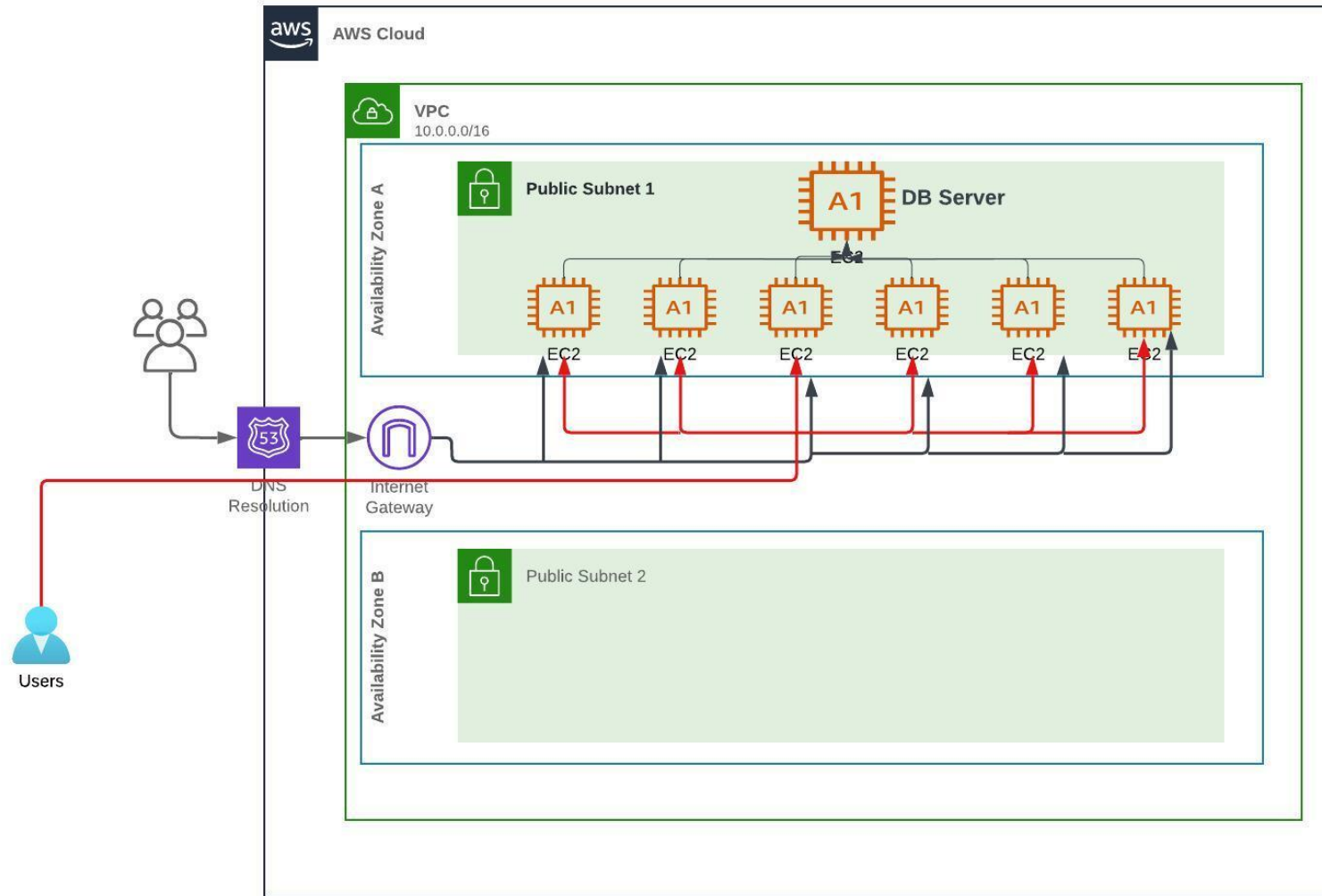
Re-Designed Infrastructure Summary

- A new VPC was created, aligned with the AWS Well-Architected Framework, incorporating Public, Private, Database, and Staging subnets.

- The application underwent a review and was redeployed in an Auto-Scaling group, positioned behind an Application Load Balancer to efficiently serve client traffic.

- Certain application services were deployed separately to alleviate the load on front-end servers, enhancing the overall customer experience.

- Configuration updates enabled the application to utilize DNS for connecting to the database.

- To facilitate Auto-Scaling, especially during Scaling-in, the application was improved with session state sharing.

Re-Designed Infrastructure Summary

- Internal Network Load Balancer and SQS service were implemented to facilitate Sync and Async communication between services.

- The database underwent a re-deployment as an AWS RDS service.

- Security measures such as WAF, NAT Gateway, Security Groups lockdown, Remote Access Gateway, IAM, and MFA were implemented to fortify the infrastructure.

- CloudWatch and third-party monitoring tools were incorporated for comprehensive and enhanced monitoring.

CLOUD
LOGICX

Crafting Tomorrow, Today!

Re-Designed Infrastructure Diagram
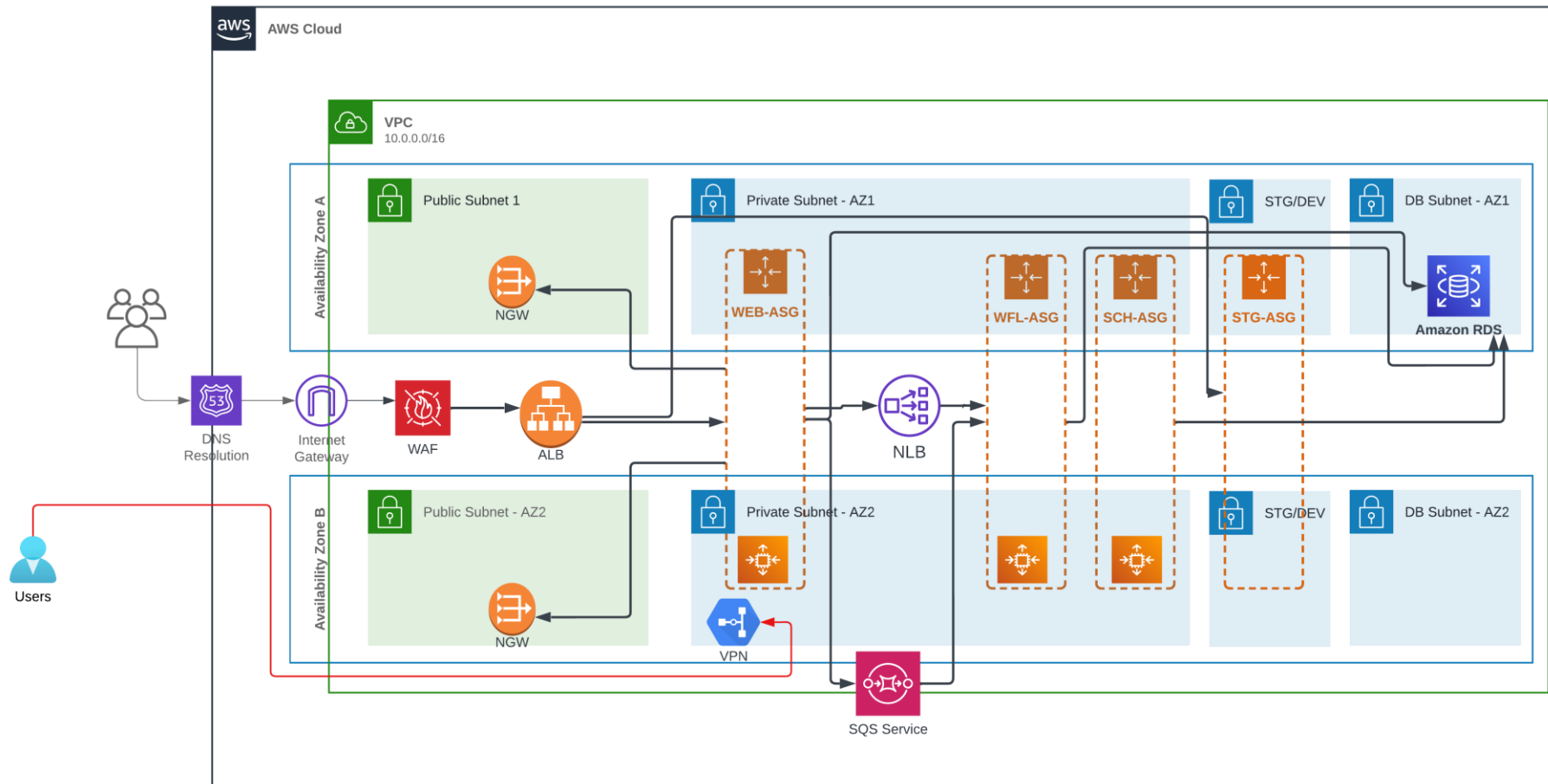
Outcome?

1. The redesigned architecture **enhanced scalability and redundancy** through a new VPC and Auto-Scaling group.

2. Service isolation optimised front-end servers, leading to an **enhanced customer experience.**

3. Internal Network Load Balancer and SQS service **streamlined Sync and Async communication between services**.

4. Database re-deployment as an AWS RDS service simplified management tasks for **improved reliability**.

5. Security controls, including WAF, NAT Gateway, Security groups lockdown, Remote Access Gateway, IAM, and MFA, **fortified the infrastructure**.

6. Implementation of CloudWatch and third-party monitoring tools ensured **comprehensive and proactive issue identification**.

Thank you!

If you'd like to explore how Cloud Logicx can assist with your infrastructure, please feel free to reach out and schedule a no-obligation call with one of our experts.

hello@cloudlogicx.com

Ph: 020 3488 7734

CLOUD LOGICX

Crafting Tomorrow, Today!