CASE STUDY

SoftServe's Well-Architected Review
Supports Successful AWS Cloud Migration

softserve

Client Background

Our client provides software for the HR and recruiting service industry.

Business Challenge

When our Client began its cloud adoption it was still running the majority of resources in a colocation facility and had designed and implemented basic infrastructure components in AWS Cloud. Our client's goal was to completely migrate the workload to AWS Cloud within a three month deadline with a focus on cloud security. Our client had a clear plan and used a mixed cloud migration strategy (lift-and-shift and re-architecting).

Our client requested assistance with this migration to AWS Cloud, but did not want to go through a full assessment phase, a requisite prior to any migration. It allows for the creation of a proper migration roadmap, designing desired architecture according to functional and nonfunctional requirements, determining milestones and required team composition. It is also a time consuming procedure, requiring about four weeks working with technical experts (cloud and solution architects, security engineers, developers, QC experts, DBA) and business stakeholders.

Our client already had some items complete, including identifying milestones and desired state with the requirements. They didn't want to spend weeks reviewing and recreating that plan from scratch. Migration deadlines required them to ideate and operate quickly.

To ensure a successful migration within the tight deadline, SoftServe proposed a Well-Architected Review, its own proprietary and customized approach for this review which provides clients with a detailed review report and architecture improvements proposal. The Well-Architected Review is free for customers and does not require any commitments from them for further implementing findings and improvement recommendations from the review.
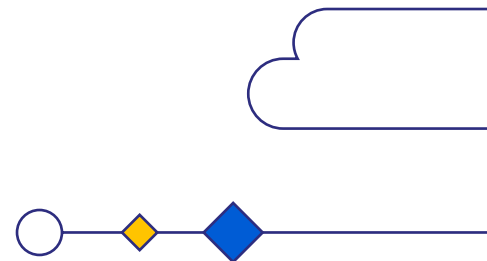
Project Description

SoftServe's certified AWS Professional Solution Architects conducted a Well-Architected Review session over two days with our client's business and technical stakeholders to provide a detailed report.

According to this report, our client's AWS cloud architecture and solution design were mature, but had some technical gaps and issues that had to be resolved to achieve the desired state, meet deadlines for the cloud migration, and build a highly available, scalable, resilient, and durable solution in AWS cloud. Solution security was emphasized as the most critical aspect. Our client had CCPA and GDPR compliance requirements it needed to meet. SoftServe's Solution Architects proposed changes to the initial solution design for AWS cloud to account for those standards and cloud security best practices.

SoftServe identified a number of risks in the solution design related to operational excellence, security, reliability, performance efficiency, and cost optimization pillars of the AWS Well-Architected Framework. Our experts helped to make required changes to solution design, milestones and their priorities, and transformed those risks into action items for improvements.
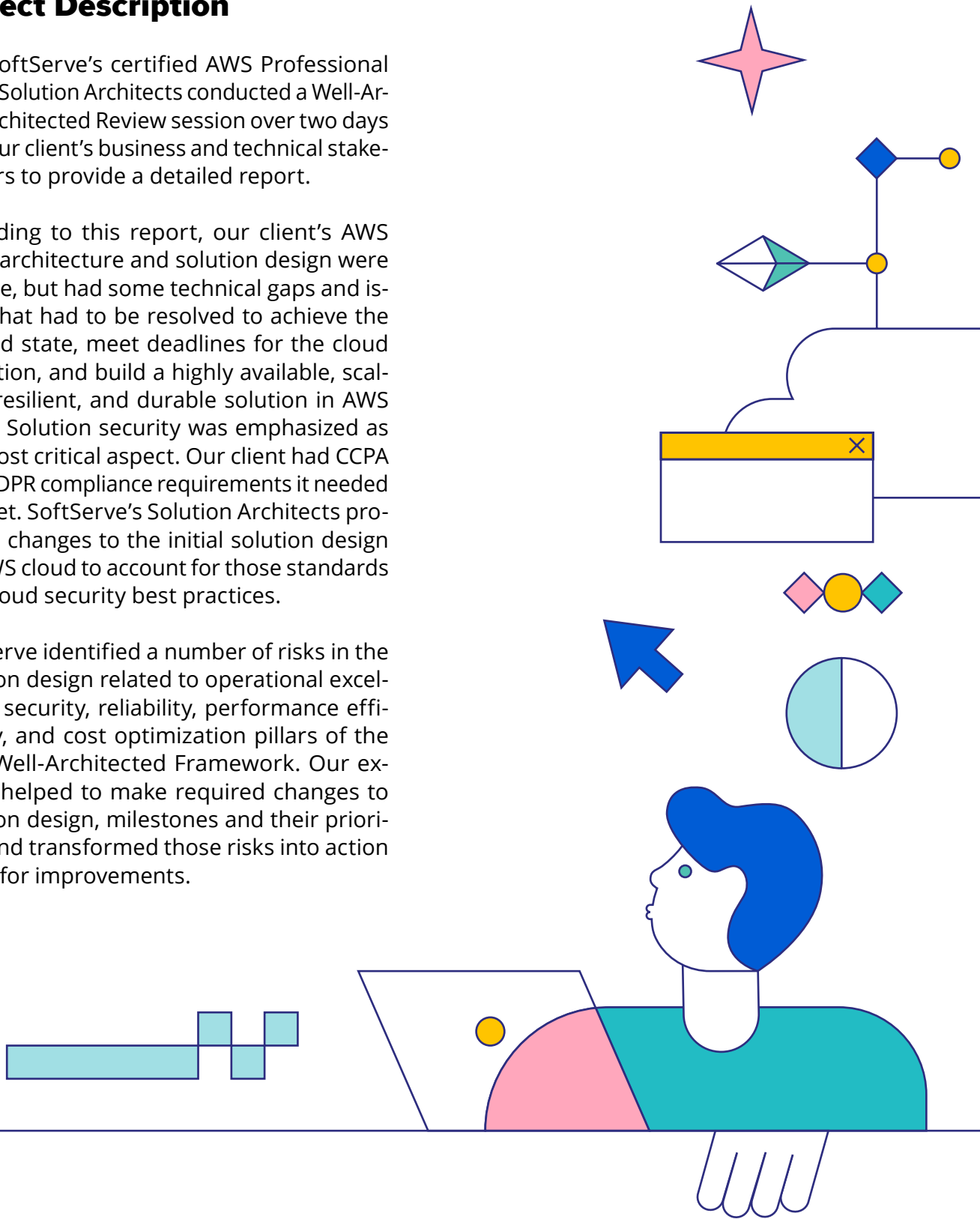
Analyzing the solution, SoftServe recommended a re-architecture and improvements for the following components:

- Address critical security gaps and problems (review IAM entities configuration, review VPC options and configurations, review of ingress/egress policies, configure VPC flow logs, review EC2 and EKS configurations, implement a solution for vulnerability scanner for container images, review S3 policies and configuration, propose security monitoring, policy enforcement and incident response toolset)

- Databases (standardize version of PostgreSQL, configure AWS RDS managed services for MS SQL DB and migrate from self-managed DB, run PoC for AWS Cassandra managed services)

- Improve monitoring, implement proactive monitoring and alerts

- Add proper tracing to determine potential bottlenecks

- Configure autoscaling for EC2 instances using properly determined metrics

- Optimize EKS cluster (implement RBAC, implement service mesh, add horizontal pod autoscaler for Kubernetes to improve pod scaling and handle spikes of the incoming load)

- Improve CI/CD for microservices, solve problems with backward compatibility

- Run AWS cost assessment and implement cost savings strategy and plans

SoftServe analyzed all findings and proposed an assistance with the implementation for risk remediation during the migration to AWS Cloud.

■ Percentage of detected risks　　■ Percentage of detected HIGH risks
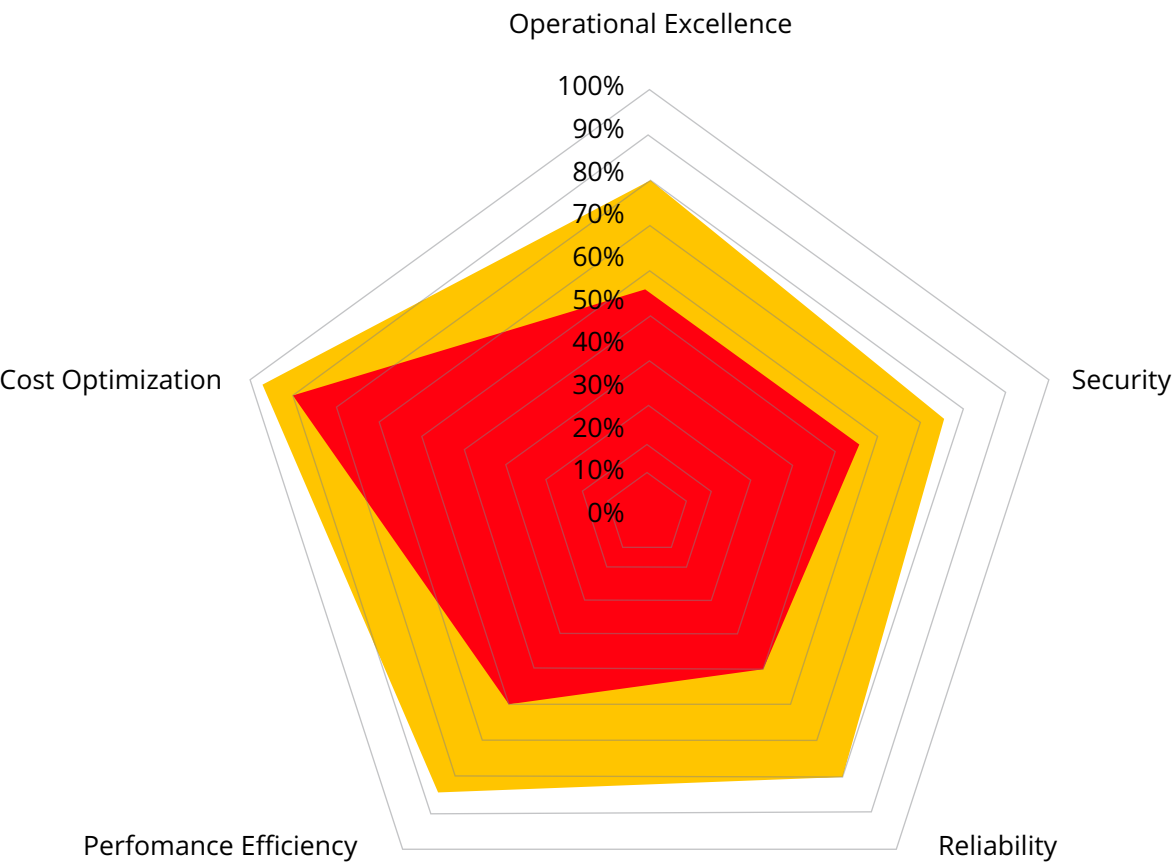
Value Delivered

*S*oftServe's security and cloud architects, DBA and DevOps experts worked closely with our client on improvements and implementation of an AWS cloud migration, as well as cloud and security optimizations. SoftServe helped to identify and address critical security gaps and issues, migrate our client's workload to AWS cloud, began AWS architecture optimization, designed a disaster recovery strategy for AWS cloud, designed a cost allocation model and improved cost savings, provided knowledge transfer sessions, and implemented an educational model.

SoftServe's Well-Architected Review helped our client to identify risks and gaps with determining a migration roadmap and designing AWS Cloud architecture, and assisted with addressing those issues by analyzing and prioritizing risk remediation steps and providing with proper team composition for the implementation. This review was free for our client and took three days, including the review itself, analysis and report preparation, and sharing with our client. It was completed with only part-time involvement of customer stakeholders.

ABOUT US

SoftServe is a digital authority that advises and provides at the cutting-edge of technology. We reveal, transform, accelerate, and optimize the way enterprises and software companies do business. With expertise across healthcare, retail, energy, financial services, and more, we implement end-to-end solutions to deliver the innovation, quality, and speed that our clients' users expect.

SoftServe delivers open innovation, from generating compelling new ideas, to developing and implementing transformational products and services.

Our work and client experience is built on a foundation of empathetic, human-focused experience design that ensures continuity from concept to release.

We empower enterprises and software companies to (re)identify differentiation, accelerate solution development, and vigorously compete in today's digital economy. No matter where you are in your journey.

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