AWS WELL-ARCHITECTED REVIEW REPORT

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Prepared for:

Sample Client
sample Company, Inc.

Date Prepared:

October, 1, 2024
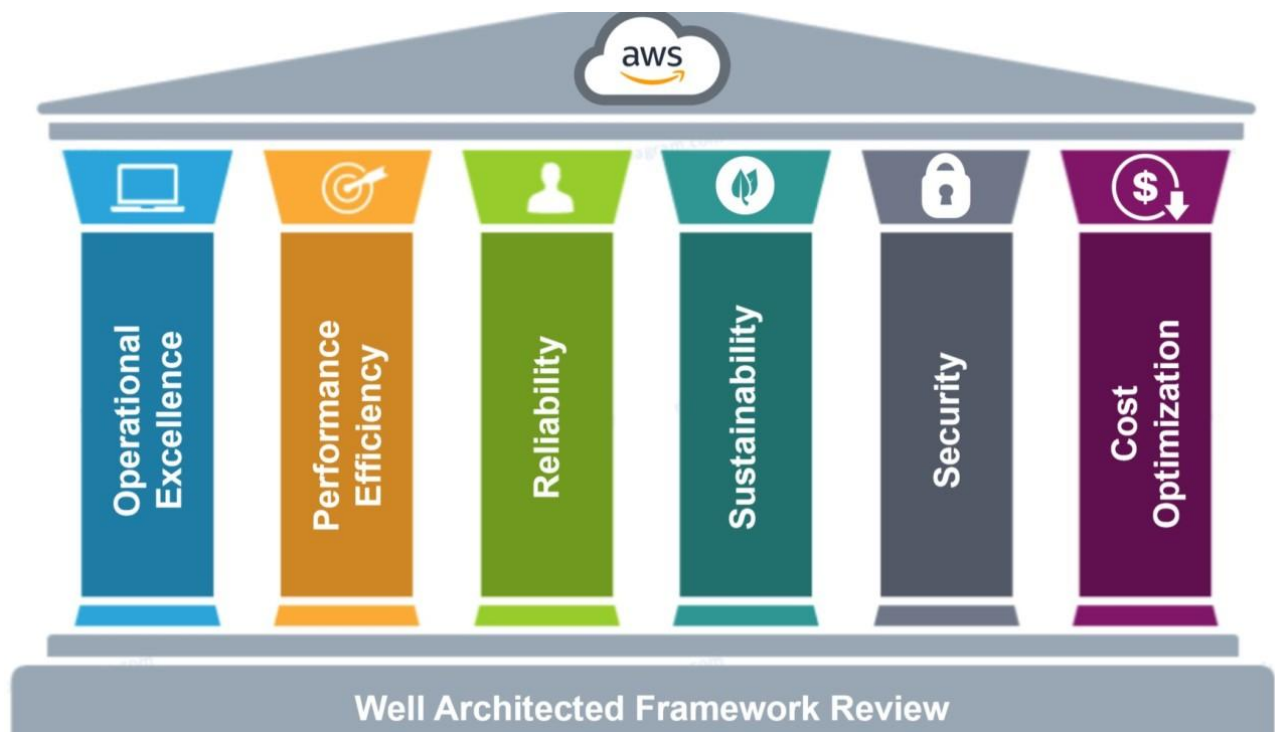
AWS Well-Architected Review Report

Prepared for: [Client Name]
Prepared by: ITAssurance, CloudAssurance Services
Date: [MM/DD/YYYY]

Executive Summary

This AWS Well-Architected Review (WAR) evaluates [Client Name]'s current cloud environment against the five AWS Well-Architected Framework pillars—Operational Excellence, Security, Reliability, Performance Efficiency, and Cost Optimization. Our assessment identified key strengths, areas of risk, and opportunities for optimization. The findings are designed to provide a clear roadmap for securing, optimizing, and scaling your AWS workloads in alignment with your business goals.

Key Findings:

- Identified [X] High-Risk Issues (HRIs) requiring immediate remediation.
- Cost optimization opportunities projected to reduce spend by [X% or $X monthly/yearly].
- Security gaps related to IAM policy sprawl, encryption practices, and logging coverage.
- Reliability improvements recommended for backup policies, fault tolerance, and monitoring.
- Performance enhancements available via instance right-sizing, autoscaling, and storage tiering.

Deliverables

- Comprehensive Review Across the 5 Pillars: Each pillar is thoroughly assessed based on your current AWS usage and business priorities.
- Detailed Risk Report: We identify high-risk issues (HRIs) and explain the potential impact on your organization.
- Prioritized Remediation Plan: Clear, actionable steps that allow you to address the most critical issues first.
- Cost Optimization Analysis: Identification of inefficiencies such as idle resources, redundant services, and misaligned instance types.
- Security and Compliance Gap Identification: Review of IAM policies, network access controls, logging, encryption, and data protection.
- Performance and Scalability Recommendations: Guidance on architectural improvements to enhance system responsiveness and uptime.
- Guided AWS Credit Pathway: If eligible, we assist with the remediation needed to unlock up to $5,000 in AWS service credits.

Assessment Findings

Operational Excellence

Observations

- Limited use of Infrastructure as Code (IaC) across environments.
- Manual deployment processes increase misconfiguration risk.
- Monitoring/alerting not consistently applied; runbooks not standardized.

Recommendations

- Adopt IaC (AWS CloudFormation/Terraform) and maintain in version control.
- Implement CI/CD (AWS CodePipeline/GitHub Actions) with peer reviews and automated tests.
- Standardize CloudWatch dashboards, alerts, and runbooks; define KPIs and SLOs.

Security

Observations

- IAM roles and policies are overly permissive (use of wildcard actions/resources).
- MFA not enforced for privileged accounts; root account protections incomplete.
- S3 bucket policies permit public access; encryption not consistently enforced.

Recommendations

- Refactor IAM to least-privilege with scoped policies; enable Access Analyzer.
- Enforce MFA for all console users; secure root account; rotate access keys.
- Enable default encryption, block public access at the account level; enable GuardDuty and Security Hub.

Reliability

Observations

- Backups are inconsistent; RTO/RPO not documented or tested.
- Single-AZ dependencies for critical workloads.
- No automated failover for databases or endpoints.

Recommendations

- Adopt AWS Backup with lifecycle policies; perform regular restore tests.
- Design for multi-AZ; consider multi-Region for tier-1 workloads.
- Use RDS Multi-AZ / Aurora; Route 53 health checks and failover routing.

Performance Efficiency

Observations

- Over-provisioned EC2 instances with low CPU/memory utilization.
- Autoscaling not configured for variable workloads.
- Suboptimal storage classes used for infrequently accessed data.

Recommendations

- Right-size using AWS Compute Optimizer; consider Graviton where applicable.
- Implement Auto Scaling groups and scale-to-zero patterns for bursty workloads.
- Apply S3 Lifecycle policies (IA/Glacier); evaluate EBS gp3 and FSx where fit.

Cost Optimization

Observations

- Idle EC2/RDS instances and unattached EBS volumes accruing charges.
- On-Demand pricing used for steady-state workloads.
- No budget alerts or anomaly detection configured.

Recommendations

- Terminate idle resources; delete unattached EBS; downsize overprovisioned instances.
- Purchase Savings Plans/Reserved Instances for predictable usage.
- Enable AWS Budgets and Cost Anomaly Detection; tag resources for chargeback/showback.

High-Risk Issues (HRIs)

Pillar	Issue	Business Impact	Risk Level	Recommendation
Security	IAM roles with wildcard permissions	Potential privilege escalation & data exfiltration	High	Refactor to least-privilege; enable Access Analyzer
Reliability	Single-AZ architecture for core API	Outage if AZ fails; missed SLAs	High	Refactor to Multi-AZ; add health checks/failover
Security	MFA not enforced for admins	Account compromise risk	High	Enforce MFA; conditional policies; disable root credentials
Cost	Idle RDS instance in non-prod	Unnecessary spend	Medium	Stop/terminate; use on-demand start/stop schedules

Risk Heat Map
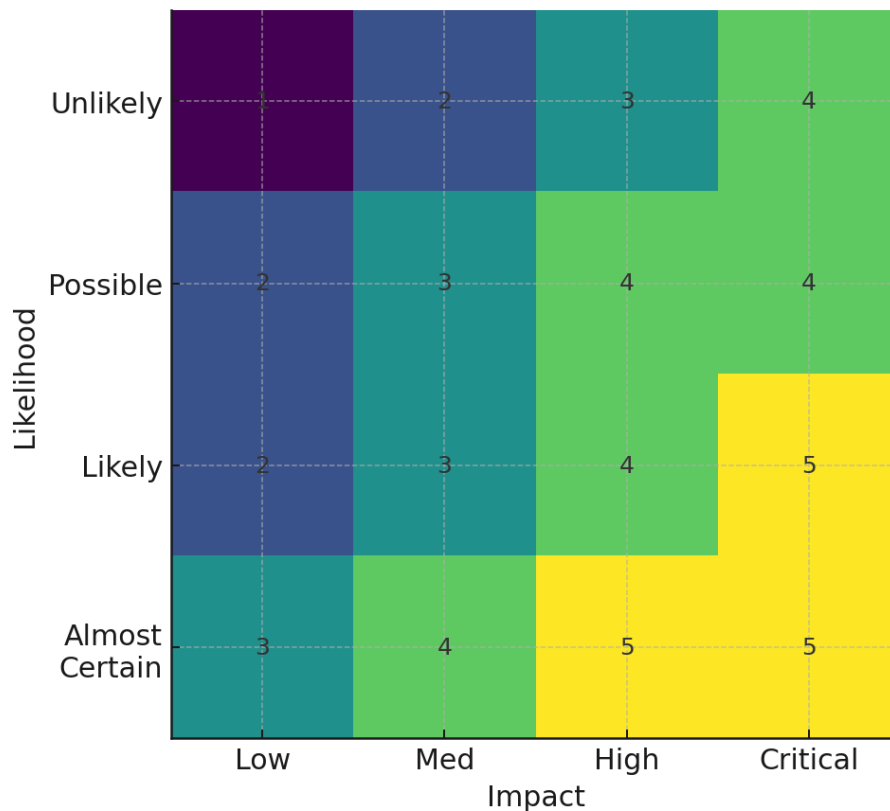
Prioritized Remediation Plan

Priority	Recommendation	Timeline	Owner
1	Enforce MFA for all administrative accounts	0–7 days	Client IT / ITAssurance
2	Refactor IAM policies to least-privilege; enable GuardDuty/Security Hub	0–14 days	Client IT / ITAssurance
3	Re-architect core workloads for Multi-AZ with automated failover	30–60 days	ITAssurance
4	Right-size instances; adopt Savings Plans; clean up EBS	30–60 days	Client IT
5	Adopt AWS Backup with lifecycle and quarterly restore tests	30–90 days	ITAssurance

Cost Optimization Opportunities

Estimated Monthly Savings: $[X,XXX]

Opportunity	Current Spend	Optimized Spend	Estimated Savings
Idle EC2 Instances	$500	$0	$500
Unattached EBS Volumes	$200	$0	$200
Savings Plans vs On-Demand	$2,000	$1,200	$800
S3 Tier Optimization	$1,500	$1,100	$400

Next Steps

- Remediate High-Risk Issues (MFA, IAM, Multi-AZ).
- Implement Cost Optimization Plan (right-size, Savings Plans, cleanup).
- Enhance Monitoring & Automation (dashboards, alerts, CI/CD).
- Schedule Follow-Up Review (validate remediation and update roadmap).

AWS Credits Pathway

Based on this review, [Client Name] may be eligible for up to $5,000 in AWS service credits. ITAssurance will guide you through the remediation and submission process required to unlock these credits.

Final Thoughts

This Well-Architected Review provides a clear view of your current AWS environment and actionable guidance for improvement. By addressing identified risks, optimizing costs, and aligning architecture with AWS best practices, [Client Name] will be positioned to scale securely, efficiently, and cost-effectively.