AWS Well-Architected Tool

AWS Well-Architected Tool Consolidated Report

AWS Account ID: 326660656467

AWS Well-Architected Tool Report

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This report was generated using the following options:

Include workloads shared with me: no

Overview

Total workloads	1
Workloads with high risk issues	1
Workloads with medium risk issues	1
Total high risk issues	40
Total medium risk issues	13

Well-Architected Framework issues per pillar (all workloads)

Only issues from the Well-Architected Framework lens are shown

Pillar	High risk issues	Medium risk issues
Operational Excellence	8	2
Security	7	3
Reliability	10	1
Performance Efficiency	6	1
Cost Optimization	9	0
Sustainability	0	6

Well-Architected Framework issues per workload

Only issues from the Well-Architected Framework lens are shown

Workload	Total issues	Operational Excellence	Security	Reliability	Performance Efficiency	Cost Optimization	Sustainability
WAFR Questions answered: 60/60 Lenses applied: 1 Last updated: Jun 26, 2023 5:54 PM UTC	High: 40 Medium: 13	High: 8 Medium: 2	High: 7 Medium: 3	⊗ High: 10 Medium: 1	High: 6 Medium: 1	High: 9 Medium: 0	High: 0 Medium: 6

Well-Architected Framework issues by improvement plan item

Only issues from the Well-Architected Framework lens are shown

Improvement item	Pillar	Risk	Applicable workloads
Evaluate external customer needs	Operational Excellence	High	WAFR
Evaluate internal customer needs	Operational Excellence	High	WAFR
Evaluate governance requirements	Operational Excellence	High	WAFR
Evaluate compliance requirements	Operational Excellence	High	WAFR
Evaluate threat landscape	Operational Excellence	High	WAFR
Evaluate tradeoffs	Operational Excellence	High	WAFR
Manage benefits and risks	Operational Excellence	High	WAFR
Communications are timely, clear, and actionable	Operational Excellence	High	WAFR
Resource teams appropriately	Operational Excellence	High	WAFR
Implement application telemetry	Operational Excellence	High	WAFR

Improvement item	Pillar	Risk	Applicable workloads
Implement and configure workload telemetry	Operational Excellence	High	WAFR
Implement user activity telemetry	Operational Excellence	High	WAFR
Implement dependency telemetry	Operational Excellence	High	WAFR
Implement transaction traceability	Operational Excellence	High	WAFR
Ensure personnel capability	Operational Excellence	High	WAFR
Ensure consistent review of operational readiness	Operational Excellence	High	WAFR
Use runbooks to perform procedures	Operational Excellence	High	WAFR
Use playbooks to investigate issues	Operational Excellence	High	WAFR
Enable support plans for production workloads	Operational Excellence	High	WAFR
Identify key performance indicators	Operational Excellence	High	WAFR
Define workload metrics	Operational Excellence	High	WAFR
Collect and analyze workload metrics	Operational Excellence	High	WAFR
Establish workload metrics baselines	Operational Excellence	High	WAFR
Learn expected patterns of activity for workload	Operational Excellence	High	WAFR

Improvement item	Pillar	Risk	Applicable workloads
Alert when workload outcomes are at risk	Operational Excellence	High	WAFR
Alert when workload anomalies are detected	Operational Excellence	High	WAFR
Validate the achievement of outcomes and the effectiveness of KPIs and metrics	Operational Excellence	High	WAFR
Identify key performance indicators	Operational Excellence	High	WAFR
Define operations metrics	Operational Excellence	High	WAFR
Collect and analyze operations metrics	Operational Excellence	High	WAFR
Establish operations metrics baselines	Operational Excellence	High	WAFR
Learn the expected patterns of activity for operations	Operational Excellence	High	WAFR
Alert when operations outcomes are at risk	Operational Excellence	High	WAFR
Alert when operations anomalies are detected	Operational Excellence	High	WAFR
Validate the achievement of outcomes and the effectiveness of KPIs and metrics	Operational Excellence	High	WAFR

Improvement item	Pillar	Risk	Applicable workloads
Use a process for event, incident, and problem management	Operational Excellence	High	WAFR
Have a process per alert	Operational Excellence	High	WAFR
Prioritize operational events based on business impact	Operational Excellence	High	WAFR
Define escalation paths	Operational Excellence	High	WAFR
Define a customer communication plan for outages	Operational Excellence	High	WAFR
Communicate status through dashboards	Operational Excellence	High	WAFR
Automate responses to events	Operational Excellence	High	WAFR
Perform post-incident analysis	Operational Excellence	High	WAFR
Validate insights	Operational Excellence	High	WAFR
Perform operations metrics reviews	Operational Excellence	High	WAFR
Allocate time to make improvements	Operational Excellence	High	WAFR
Secure account root user and properties	Security	High	WAFR
Identify and validate control objectives	Security	High	WAFR

Improvement item	Pillar	Risk	Applicable workloads
Identify threats and prioritize mitigations using a threat model	Security	High	WAFR
Automate testing and validation of security controls in pipelines	Security	High	WAFR
Use temporary credentials	Security	High	WAFR
Store and use secrets securely	Security	High	WAFR
Audit and rotate credentials periodically	Security	High	WAFR
Control traffic at all layers	Security	High	WAFR
Automate network protection	Security	High	WAFR
Perform vulnerability management	Security	High	WAFR
Reduce attack surface	Security	High	WAFR
Automate compute protection	Security	High	WAFR
Enable people to perform actions at a distance	Security	High	WAFR
Validate software integrity	Security	High	WAFR
Identify the data within your workload	Security	High	WAFR
Define data protection controls	Security	High	WAFR

Improvement item	Pillar	Risk	Applicable workloads
Automate identification and classification	Security	High	WAFR
Define data lifecycle management	Security	High	WAFR
Implement secure key management	Security	High	WAFR
Use mechanisms to keep people away from data	Security	High	WAFR
Deploy software programmatically	Security	High	WAFR
Regularly assess security properties of the pipelines	Security	High	WAFR
Train for application security	Security	High	WAFR
Manual code reviews	Security	High	WAFR
Centralize services for packages and dependencies	Security	High	WAFR
Build a program that embeds security ownership in workload teams	Security	High	WAFR
Aware of service quotas and constraints	Reliability	High	WAFR
Manage service quotas across accounts and Regions	Reliability	High	WAFR

Improvement item	Pillar	Risk	Applicable workloads
Accommodate fixed service quotas and constraints through architecture	Reliability	High	WAFR
Monitor and manage quotas	Reliability	High	WAFR
Automate quota management	Reliability	High	WAFR
Ensure that a sufficient gap exists between the current quotas and the maximum usage to accommodate failover	Reliability	High	WAFR
Provision redundant connectivity between private networks in the cloud and on-premises environments	Reliability	High	WAFR
Identify which kind of distributed system is required	Reliability	High	WAFR
Implement loosely coupled dependencies	Reliability	High	WAFR
Make all responses idempotent	Reliability	High	WAFR
Do constant work	Reliability	High	WAFR
Implement graceful degradation to transform applicable hard dependencies into soft dependencies	Reliability	High	WAFR

Improvement item	Pillar	Risk	Applicable workloads
Throttle requests	Reliability	High	WAFR
Control and limit retry calls	Reliability	High	WAFR
Set client timeouts	Reliability	High	WAFR
Make services stateless where possible	Reliability	High	WAFR
Implement emergency levers	Reliability	High	WAFR
Monitor all components for the workload (Generation)	Reliability	High	WAFR
Define and calculate metrics (Aggregation)	Reliability	High	WAFR
Automate responses (Real-time processing and alarming)	Reliability	High	WAFR
Analytics	Reliability	High	WAFR
Conduct reviews regularly	Reliability	High	WAFR
Monitor end-to-end tracing of requests through your system	Reliability	High	WAFR
Use automation when obtaining or scaling resources	Reliability	High	WAFR
Obtain resources upon detection of impairment to a workload	Reliability	High	WAFR

Improvement item	Pillar	Risk	Applicable workloads
Obtain resources upon detection that more resources are needed for a workload	Reliability	High	WAFR
Load test your workload	Reliability	High	WAFR
Deploy the workload to multiple locations	Reliability	High	WAFR
Select the appropriate locations for your multi-location deployment	Reliability	High	WAFR
Use bulkhead architectures to limit scope of impact	Reliability	High	WAFR
Automate recovery for components constrained to a single location	Reliability	High	WAFR
Fail over to healthy resources	Reliability	High	WAFR
Automate healing on all layers	Reliability	High	WAFR
Rely on the data plane and not the control plane during recovery	Reliability	High	WAFR
Use static stability to prevent bimodal behavior	Reliability	High	WAFR
Send notifications when events impact availability	Reliability	High	WAFR

Improvement item	Pillar	Risk	Applicable workloads
Architect your product to meet availability targets and uptime service level agreements (SLAs)	Reliability	High	WAFR
Use playbooks to investigate failures	Reliability	High	WAFR
Perform post-incident analysis	Reliability	High	WAFR
Test scaling and performance requirements	Reliability	High	WAFR
Test resiliency using chaos engineering	Reliability	High	WAFR
Conduct game days regularly	Reliability	High	WAFR
Test disaster recovery implementation to validate the implementation	Reliability	High	WAFR
Manage configuration drift at the DR site or Region	Reliability	High	WAFR
Automate recovery	Reliability	High	WAFR
Define a process for architectural choices	Performance Efficiency	High	WAFR
Benchmark existing workloads	Performance Efficiency	High	WAFR
Load test your workload	Performance Efficiency	High	WAFR
Collect compute-related metrics	Performance Efficiency	High	WAFR

Improvement item	Pillar	Risk	Applicable workloads
Collect and record database performance metrics	Performance Efficiency	High	WAFR
Choose data storage based on access patterns	Performance Efficiency	High	WAFR
Optimize data storage based on access patterns and metrics	Performance Efficiency	High	WAFR
Leverage load-balancing and encryption offloading	Performance Efficiency	High	WAFR
Choose your workload's location based on network requirements	Performance Efficiency	High	WAFR
Record performance-related metrics	Performance Efficiency	High	WAFR
Analyze metrics when events or incidents occur	Performance Efficiency	High	WAFR
Establish key performance indicators (KPIs) to measure workload performance	Performance Efficiency	High	WAFR
Use monitoring to generate alarm-based notifications	Performance Efficiency	High	WAFR
Review metrics at regular intervals	Performance Efficiency	High	WAFR
Understand the areas where performance is most critical	Performance Efficiency	High	WAFR

Improvement item	Pillar	Risk	Applicable workloads
Learn about design patterns and services	Performance Efficiency	High	WAFR
Identify how tradeoffs impact customers and efficiency	Performance Efficiency	High	WAFR
Measure the impact of performance improvements	Performance Efficiency	High	WAFR
Use various performance-related strategies	Performance Efficiency	High	WAFR
Establish a cost optimization function	Cost Optimization	High	WAFR
Establish a partnership between finance and technology	Cost Optimization	High	WAFR
Establish cloud budgets and forecasts	Cost Optimization	High	WAFR
Implement cost awareness in your organizational processes	Cost Optimization	High	WAFR
Monitor cost proactively	Cost Optimization	High	WAFR
Keep up to date with new service releases	Cost Optimization	High	WAFR
Quantify business value from cost optimization	Cost Optimization	High	WAFR
Create a cost-aware culture	Cost Optimization	High	WAFR

Improvement item	Pillar	Risk	Applicable workloads
Develop policies based on your organization requirements	Cost Optimization	High	WAFR
Implement goals and targets	Cost Optimization	High	WAFR
Implement cost controls	Cost Optimization	High	WAFR
Track project lifecycle	Cost Optimization	High	WAFR
Track resources over their life time	Cost Optimization	High	WAFR
Implement a decommissioning process	Cost Optimization	High	WAFR
Decommission resources	Cost Optimization	High	WAFR
Enforce data retention policies	Cost Optimization	High	WAFR
Decommission resources automatically	Cost Optimization	High	WAFR
Identify organization requirements for cost	Cost Optimization	High	WAFR
Analyze all components of this workload	Cost Optimization	High	WAFR
Perform a thorough analysis of each component	Cost Optimization	High	WAFR
Select components of this workload to optimize cost in line with organization priorities	Cost Optimization	High	WAFR

Improvement item	Pillar	Risk	Applicable workloads
Perform cost analysis for different usage over time	Cost Optimization	High	WAFR
Select software with cost effective licensing	Cost Optimization	High	WAFR
Perform cost modeling	Cost Optimization	High	WAFR
Select resource type, size, and number based on data	Cost Optimization	High	WAFR
Select resource type, size, and number automatically based on metrics	Cost Optimization	High	WAFR
Perform pricing model analysis	Cost Optimization	High	WAFR
Implement Regions based on cost	Cost Optimization	High	WAFR
Select third party agreements with cost efficient terms	Cost Optimization	High	WAFR
Implement pricing models for all components of this workload	Cost Optimization	High	WAFR
Perform pricing model analysis at the master account level	Cost Optimization	High	WAFR
Perform data transfer modeling	Cost Optimization	High	WAFR
Select components to optimize data transfer cost	Cost Optimization	High	WAFR

Improvement item	Pillar	Risk	Applicable workloads
Implement services to reduce data transfer costs	Cost Optimization	High	WAFR
Perform an analysis on the workload demand	Cost Optimization	High	WAFR
Implement a buffer or throttle to manage demand	Cost Optimization	High	WAFR
Supply resources dynamically	Cost Optimization	High	WAFR
Develop a workload review process	Cost Optimization	High	WAFR
Review and analyze this workload regularly	Cost Optimization	High	WAFR
Use configuration management systems	Operational Excellence	Medium	WAFR
Use build and deployment management systems	Operational Excellence	Medium	WAFR
Share design standards	Operational Excellence	Medium	WAFR
Make frequent, small, reversible changes	Operational Excellence	Medium	WAFR
Fully automate integration and deployment	Operational Excellence	Medium	WAFR
Use deployment management systems	Operational Excellence	Medium	WAFR

Improvement item	Pillar	Risk	Applicable workloads
Test using limited deployments	Operational Excellence	⚠ Medium	WAFR
Fully automate integration and deployment	Operational Excellence	⚠ Medium	WAFR
Automate testing and rollback	Operational Excellence	⚠ Medium	WAFR
Reduce permissions continuously	Security	⚠ Medium	WAFR
Define permission guardrails for your organization	Security	⚠ Medium	WAFR
Share resources securely within your organization	Security	⚠ Medium	WAFR
Share resources securely with a third party	Security	⚠ Medium	WAFR
Manage access based on life cycle	Security	⚠ Medium	WAFR
Analyze public and cross-account access	Security	⚠ Medium	WAFR
Automate response to events	Security	⚠ Medium	WAFR
Implement actionable security events	Security	⚠ Medium	WAFR
Prepare forensic capabilities	Security	⚠ Medium	WAFR
Pre-provision access	Security	⚠ Medium	WAFR

Improvement item	Pillar	Risk	Applicable workloads
Run game days	Security	⚠ Medium	WAFR
Integrate resiliency testing as part of your deployment	Reliability	⚠ Medium	WAFR
Deploy using immutable infrastructure	Reliability	⚠ Medium	WAFR
Deploy changes with automation	Reliability	⚠ Medium	WAFR
Define a process to improve workload performance	Performance Efficiency	⚠ Medium	WAFR
Evolve workload performance over time	Performance Efficiency	⚠ Medium	WAFR
Choose Region based on both business requirements and sustainability goals	Sustainability	⚠ Medium	WAFR
Scale workload infrastructure dynamically	Sustainability	⚠ Medium	WAFR
Optimize geographic placement of workloads based on their networking requirements	Sustainability	⚠ Medium	WAFR
Align SLAs with sustainability goals	Sustainability	⚠ Medium	WAFR
Stop the creation and maintenance of unused assets	Sustainability	⚠ Medium	WAFR
Optimize team member resources for	Sustainability	⚠ Medium	WAFR

Improvement item	Pillar	Risk	Applicable workloads
activities performed			
Implement buffering or throttling to flatten the demand curve	Sustainability	⚠ Medium	WAFR
Optimize software and architecture for asynchronous and scheduled jobs	Sustainability	⚠ Medium	WAFR
Remove or refactor workload components with low or no use	Sustainability	⚠ Medium	WAFR
Optimize areas of code that consume the most time or resources	Sustainability	⚠ Medium	WAFR
Optimize impact on devices and equipment	Sustainability	⚠ Medium	WAFR
Use software patterns and architectures that best support data access and storage patterns	Sustainability	⚠ Medium	WAFR
Implement a data classification policy	Sustainability	⚠ Medium	WAFR
Use policies to manage the lifecycle of your datasets	Sustainability	⚠ Medium	WAFR
Use elasticity and automation to expand block storage or file system	Sustainability	⚠ Medium	WAFR
Remove unneeded or redundant data	Sustainability	⚠ Medium	WAFR

Improvement item	Pillar	Risk	Applicable workloads
Use shared file systems or storage to access common data	Sustainability	⚠ Medium	WAFR
Minimize data movement across networks	Sustainability	⚠ Medium	WAFR
Back up data only when difficult to recreate	Sustainability	⚠ Medium	WAFR
Use technologies that support data access and storage patterns	Sustainability	⚠ Medium	WAFR
Use the minimum amount of hardware to meet your needs	Sustainability	⚠ Medium	WAFR
Use instance types with the least impact	Sustainability	⚠ Medium	WAFR
Use managed services	Sustainability	⚠ Medium	WAFR
Optimize your use of hardware-based compute accelerators	Sustainability	⚠ Medium	WAFR
Adopt methods that can rapidly introduce sustainability improvements	Sustainability	⚠ Medium	WAFR
Keep your workload up-to-date	Sustainability	⚠ Medium	WAFR
Increase utilization of build environments	Sustainability	⚠ Medium	WAFR

Improvement item	Pillar	Risk	Applicable workloads
Use managed device farms for testing	Sustainability	Medium	WAFR