| Item No. | High Risks | Improvement Plan | Applicable AWS Services |
| --- | --- | --- | --- |
| 1 | OPS1 | * [Evaluate compliance requirements](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_priorities_compliance_reqs.html) * [Evaluate threat landscape](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_priorities_eval_threat_landscape.html) | * AWS Trusted Advisor |
| 2 | OPS4 | * [Implement application telemetry](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_telemetry_application_telemetry.html) * [Implement and configure workload telemetry](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_telemetry_workload_telemetry.html) * [Implement user activity telemetry](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_telemetry_customer_telemetry.html) * [Implement transaction traceability](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_telemetry_dist_trace.html) |  |
| 3 | OPS5 | * [Use version control](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_dev_integ_version_control.html) * [Use build and deployment management systems](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_dev_integ_build_mgmt_sys.html) * [Perform patch management](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_dev_integ_patch_mgmt.html) * [Use multiple environments](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_dev_integ_multi_env.html) * [Fully automate integration and deployment](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_dev_integ_auto_integ_deploy.html) |  |
| 4 | OPS6 | * [Plan for unsuccessful changes](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_mit_deploy_risks_plan_for_unsucessful_changes.html) * [Deploy using parallel environments](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_mit_deploy_risks_deploy_to_parallel_env.html) |  |
| 5 | OPS8 | * [Identify key performance indicators](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_workload_health_define_workload_kpis.html) * [Define workload metrics](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_workload_health_design_workload_metrics.html) * [Collect and analyze workload metrics](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_workload_health_collect_analyze_workload_metrics.html) * [Establish workload metrics baselines](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_workload_health_workload_metric_baselines.html) * [Learn expected patterns of activity for workload](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_workload_health_learn_workload_usage_patterns.html) * [Alert when workload outcomes are at risk](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_workload_health_workload_outcome_alerts.html) * [Alert when workload anomalies are detected](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_workload_health_workload_anomaly_alerts.html) * [Validate the achievement of outcomes and the effectiveness of KPIs and metrics](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_workload_health_biz_level_view_workload.html) |  |
| 6 | OPS10 | * [Use processes for event, incident, and problem management](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_event_response_event_incident_problem_process.html) * [Have a process per alert](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_event_response_process_per_alert.html) * [Prioritize operational events based on business impact](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_event_response_prioritize_events.html) * [Define escalation paths](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_event_response_define_escalation_paths.html) * [Enable push notifications](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_event_response_push_notify.html) * [Communicate status through dashboards](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_event_response_dashboards.html) * [Automate responses to events](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/ops_event_response_auto_event_response.html) |  |
| 7 | SEC1 | * [Secure AWS account](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/sec_securely_operate_aws_account.html) * [Keep up to date with security threats](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/sec_securely_operate_updated_threats.html) |  |
| 8 | SEC2 | * [Use strong sign-in mechanisms](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/sec_identities_enforce_mechanisms.html) * [Use temporary credentials](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/sec_identities_unique.html) * [Store and use secrets securely](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/sec_identities_secrets.html) * [Rely on a centralized identity provider](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/sec_identities_identity_provider.html) * [Audit and rotate credentials periodically](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/sec_identities_audit.html) * [Leverage user groups and attributes](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/sec_identities_groups_attributes.html) |  |
| 9 | SEC4 | * [Analyze logs, findings, and metrics centrally](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/sec_detect_investigate_events_analyze_all.html) * [Automate response to events](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/sec_detect_investigate_events_auto_response.html) * [Implement actionable security events](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/sec_detect_investigate_events_actionable_events.html) |  |
| 10 | SEC7 | * [Identify the data within your workload](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/sec_data_classification_identify_data.html) * [Define data protection controls](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/sec_data_classification_define_protection.html) |  |
| 11 | SEC10 | * [Identify key personnel and external resources](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/sec_incident_response_identify_personnel.html) * [Develop incident management plans](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/sec_incident_response_develop_management_plans.html) * [Prepare forensic capabilities](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/sec_incident_response_prepare_forensic.html) * [Automate containment capability](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/sec_incident_response_auto_contain.html) * [Pre-provision access](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/sec_incident_response_pre_provision_access.html) * [Pre-deploy tools](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/sec_incident_response_pre_deploy_tools.html) * [Run game days](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/sec_incident_response_run_game_days.html) |  |
| 12 | REL1 | * [Aware of service quotas and constraints](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/rel_manage_service_limits_aware_quotas_and_constraints.html) * [Manage service quotas across accounts and regions](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/rel_manage_service_limits_limits_considered.html) * [Accommodate fixed service quotas and constraints through architecture](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/rel_manage_service_limits_aware_fixed_limits.html) * [Monitor and manage quotas](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/rel_manage_service_limits_monitor_manage_limits.html) * [Automate quota management](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/rel_manage_service_limits_automated_monitor_limits.html) * [Ensure that a sufficient gap exists between the current quotas and the maximum usage to accommodate failover](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/rel_manage_service_limits_suff_buffer_limits.html) |  |
| 13 | REL3 | * [Choose how to segment your workload](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/rel_service_architecture_monolith_soa_microservice.html) * [Build services focused on specific business domains and functionality](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/rel_service_architecture_business_domains.html) * [Provide service contracts per API](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/rel_service_architecture_api_contracts.html) |  |
| 14 | REL4 | * [Identify which kind of distributed system is required](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/rel_prevent_interaction_failure_identify.html) * [Implement loosely coupled dependencies](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/rel_prevent_interaction_failure_loosely_coupled_system.html) * [Do constant work](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/rel_prevent_interaction_failure_constant_work.html) * [Make all responses idempotent](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/rel_prevent_interaction_failure_idempotent.html) |  |
| 15 | REL5 | * [Implement graceful degradation to transform applicable hard dependencies into soft dependencies](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/rel_mitigate_interaction_failure_graceful_degradation.html) * [Throttle requests](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/rel_mitigate_interaction_failure_throttle_requests.html) * [Control and limit retry calls](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/rel_mitigate_interaction_failure_limit_retries.html) * [Fail fast and limit queues](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/rel_mitigate_interaction_failure_fail_fast.html) * [Set client timeouts](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/rel_mitigate_interaction_failure_client_timeouts.html) * [Make services stateless where possible](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/rel_mitigate_interaction_failure_stateless.html) * [Implement emergency levers](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/rel_mitigate_interaction_failure_emergency_levers.html) |  |
| 16 | REL6 | * [Define and calculate metrics (Aggregation)](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/rel_monitor_aws_resources_notification_aggregation.html) * [Send notifications (Real-time processing and alarming)](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/rel_monitor_aws_resources_notification_monitor.html) * [Automate responses (Real-time processing and alarming)](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/rel_monitor_aws_resources_automate_response_monitor.html) * [Analytics](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/rel_monitor_aws_resources_storage_analytics.html) * [Conduct reviews regularly](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/rel_monitor_aws_resources_review_monitoring.html) * [Monitor end-to-end tracing of requests through your system](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/rel_monitor_aws_resources_end_to_end.html) |  |
| 17 | COST1 | * [Establish a cost optimization function](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_cloud_financial_management_function.html) * [Establish a partnership between finance and technology](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_cloud_financial_management_partnership.html) * [Establish cloud budgets and forecasts](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_cloud_financial_management_budget_forecast.html) * [Implement cost awareness in your organizational processes](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_cloud_financial_management_cost_awareness.html) * [Report and notify on cost optimization](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_cloud_financial_management_usage_report.html) * [Monitor cost proactively](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_cloud_financial_management_proactive_process.html) * [Keep up to date with new service releases](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_cloud_financial_management_scheduled.html) |  |
| 18 | COST2 | * [Develop policies based on your organization requirements](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_govern_usage_policies.html) * [Implement goals and targets](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_govern_usage_goal_target.html) * [Implement an account structure](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_govern_usage_account_structure.html) * [Implement groups and roles](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_govern_usage_groups_roles.html) * [Implement cost controls](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_govern_usage_controls.html) * [Track project lifecycle](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_govern_usage_track_lifecycle.html) |  |
| 19 | COST3 | * [Configure detailed information sources](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_monitor_usage_detailed_source.html) * [Identify cost attribution categories](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_monitor_usage_define_attribution.html) * [Establish organization metrics](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_monitor_usage_define_kpi.html) * [Configure billing and cost management tools](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_monitor_usage_config_tools.html) * [Add organization information to cost and usage](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_monitor_usage_org_information.html) * [Allocate costs based on workload metrics](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_monitor_usage_allocate_outcome.html) |  |
| 20 | COST4 | * [Track resources over their life time](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_decomissioning_resources_track.html) * [Implement a decommissioning process](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_decomissioning_resources_implement_process.html) * [Decommission resources](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_decomissioning_resources_decommission.html) * [Decommission resources automatically](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_decomissioning_resources_decomm_automated.html) |  |
| 21 | COST6 | * [Perform cost modeling](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_type_size_number_resources_cost_modeling.html) * [Select resource type, size, and number based on data](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_type_size_number_resources_data.html) * [Select resource type, size, and number automatically based on metrics](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_type_size_number_resources_metrics.html) |  |
| 22 | COST7 | * [Perform pricing model analysis](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_pricing_model_analysis.html) * [Implement regions based on cost](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_pricing_model_region_cost.html) * [Select third party agreements with cost efficient terms](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_pricing_model_third_party.html) * [Implement pricing models for all components of this workload](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_pricing_model_implement_models.html) * [Perform pricing model analysis at the master account level](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_pricing_model_master_analysis.html) |  |
| 23 | COST8 | * [Perform data transfer modeling](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_data_transfer_modeling.html) * [Select components to optimize data transfer cost](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_data_transfer_optimized_components.html) * [Implement services to reduce data transfer costs](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_data_transfer_implement_services.html) |  |
| 24 | COST9 | * [Perform an analysis on the workload demand](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_manage_demand_resources_cost_analysis.html) * [Implement a buffer or throttle to manage demand](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_manage_demand_resources_buffer_throttle.html) * [Supply resources dynamically](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_manage_demand_resources_dynamic.html) |  |
| 25 | COST10 | * [Develop a workload review process](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_evaluate_new_services_review_process.html) * [Review and analyze this workload regularly](https://docs.aws.amazon.com/wellarchitected/2022-03-31/framework/cost_evaluate_new_services_review_workload.html) |  |