

FinOps Decision Summary

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The CloudFormation Infrastructure as Code (IaC) template is designed with cost efficiency and operational clarity in mind. Each stack in the architecture adopts FinOps best practices:

- **Backend Stack**: DynamoDB is set to PAY_PER_REQUEST mode to avoid over-provisioning. TTL is used to automatically expire records. Lambda runs with x86_64 and a short runtime for pricing efficiency. IAM roles apply least privilege access.
- **Frontend Stack**: The static site is hosted using S3 and delivered via CloudFront for minimal operational and bandwidth cost. PublicRead is scoped only to necessary assets. Route53 is excluded to avoid additional DNS hosting charges.
- **Logging Stack**: A separate logging bucket is configured with a lifecycle policy that expires logs after 90 days, reducing ongoing storage costs.
- **Monitoring Stack**: Error monitoring uses a basic CloudWatch Alarm without triggering costly AWS actions. Notifications are routed via GitHub Actions and Slack (free tiers). AWS Budgets and dashboards are used for cost visibility.

The deployment script uses change sets to avoid full stack redeloys, further minimizing update costs. Email and chat alerts are integrated using cost-neutral tools rather than paid AWS services like Chatbot or SES.