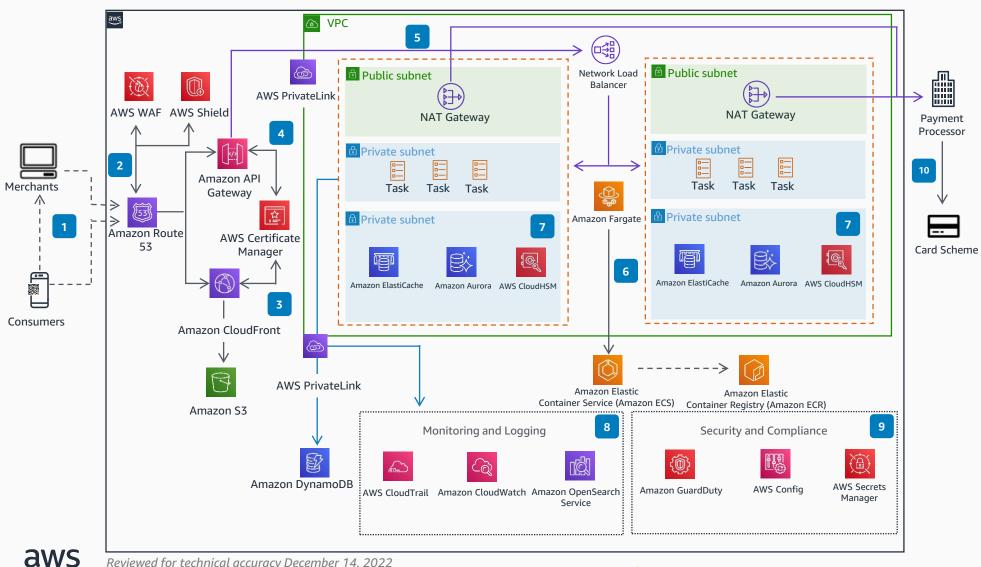
Guidance for Payment Connectivity, Gateway, Orchestration, and Routing on AWS

This reference architecture displays how a quick response (QR) or wallet payment traverses through various components.



- To start, customers scan the business QR code displayed at the checkout page on a website or at the point of sale (POS) terminal.
- Amazon Route 53 routes traffic to an Amazon API Gateway endpoint where Amazon CloudFront distributes dynamic and static content. AWS security services such as AWS WAF and AWS Shield protect the web applications from common application-layer exploits and against distributed denial-of-service (DDoS) attacks.
- CloudFront content delivery network (CDN) is used to return resources found in its cache and static resources from <u>Amazon Simple Storage Service</u> (Amazon S3).
- Amazon API Gateway and Amazon CloudFront can be seamlessly integrated with AWS Certificate Manager. These services manage the complexity of creating, storing, and renewing public and private SSL/TLS X.509 certificates and keys that protect your applications.
- The request is routed through a Network Load Balancer to distribute incoming traffic across its healthy registered targets.
- Payment request is processed at application layer using <u>Amazon Elastic Container Service</u> (Amazon ECS) that deploys tasks on <u>AWS Fargate</u>.
- Payment transaction information is stored in Amazon Aurora or Amazon DynamoDB. Amazon ElastiCache is used as a session store to manage session information in payment processing. AWS CloudHSM is a cryptographic service for creating and maintaining hardware security modules (HSMs).
- Service logs are collected in Amazon S3 and analyzed and monitored using Amazon OpenSearch Service.
- At the security and compliance layer, AWS Config evaluates, assesses, and audits configurations of resources. Amazon GuardDuty monitors for malicious activity and unauthorized behavior, protecting AWS accounts and workloads. AWS Secrets Manager helps protect secrets needed to access applications, services, and IT resources.
- Payment request outbound traffic is sent to the payment processor through a NAT Gateway that is connected to card schemes for verification.