AWS Services Overview

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| Service | Purpose | Role in the Architecture |
| Route 53 | Domain Name System (DNS) | Routes requests to API Gateway using a custom domain. |
| Amazon Cognito | User Authentication & Authorization | Authenticates users before they access the API. Manages JWT tokens for secure access. |
| Amazon API Gateway | API Management | Serves as the entry point for DL operations (retrieve, apply, renew, etc.). Validates user requests. |
| AWS Step Functions | Orchestration & Workflow | Manages and automates DL processes like approval, renewal, and retrieval. Ensures sequential execution of tasks. |
| AWS Lambda | Serverless Compute | Handles business logic for processing requests, retrieving data, and interacting with AWS services. |
| AWS Secrets Manager | Secure Credential Storage | Stores and retrieves database credentials securely for Lambda functions. |
| Amazon ElastiCache (Redis) | High-Speed Caching | Serves as a read replica to reduce load on DynamoDB and improve retrieval speed. |
| Amazon DynamoDB | NoSQL Database | Stores metadata for driving licenses, including user details and status. |
| Amazon Simple Notification Service (SNS) | Notifications | Sends alerts for DL renewal reminders and approvals. |
| Amazon Simple Queue Service (SQS) | Queue-Based Processing | Ensures reliable and asynchronous processing of license applications and renewals. |
| AWS Identity and Access Management (IAM) | Security & Access Control | Manages permissions for Lambda, API Gateway, Step Functions, and other AWS services. |
| AWS CloudTrail | Audit & Monitoring | Logs API calls and user activity for security and compliance. |
| AWS CloudWatch | Monitoring & Logging | Captures logs from Lambda, Step Functions, and API Gateway for debugging and performance tracking. |