Architecture

Proposed Services

1. Amazon Route 53

Manages DNS, directing user traffic to the application.

2. Amazon S3

Stores Pokémon images, providing scalable and durable storage.

3. Amazon CloudFront

Distributes content globally, reducing latency by caching content closer to users.

4. Amazon Application Load Balancer (ALB)

Distributes incoming traffic to ECS Fargate tasks, improving scalability and reliability.

5. Amazon ECS with Fargate

Runs the containerized Next.js application, simplifying deployment and management without managing servers.

6. Amazon RDS (PostgreSQL)

Provides a managed relational database service for persistent data storage.

7. Amazon ElastiCache (Redis)

Offers in-memory caching to improve application performance by reducing database load.

8. Amazon CloudWatch

Monitors application performance and logs, enabling proactive issue detection and resolution.

9. CI/CD Pipeline

GitHub Actions and AWS CodeDeploy for a developer-friendly, GitHub-based workflow (Implying the use of GitHub).