DroneLogbook

Benefits Summary

Automated and improved efficient deployment processes

Developed cost-optimized, scalable infrastructure

Improved logging, monitoring, and tenant management

Faster and more reliable feature delivery

About the Company

DroneLogbook is a leading platform for drone operations compliance and fleet management, offering a comprehensive suite of tools to simplify and optimize UAV operations. Tailored for diverse industries, DroneLogbook integrates with over 80 telemetry types, enabling detailed tracking and documentation of every aspect of drone missions. From mission planning and compliance reporting to fleet management and personnel tracking, DroneLogbook provides an end-to-end solution for managing drone fleets at scale.

Recognized for its robust features, DroneLogbook ensures regulatory compliance through custom and automated reporting, supporting standards from FAA to EASA. Its platform combines cloud-based security and mobile app accessibility for seamless synchronization and offline operations. Designed with scalability, flexibility, and ease of use in mind, DroneLogbook meets the unique needs of industries ranging from public safety to agriculture, making it the trusted choice for modern drone operations.

CHALLENGE

DroneLogbook faced significant challenges that hindered its ability to scale and innovate effectively, incurring high costs due to an outdated AWS Elastic Beanstalk setup that lacked automation for application builds and deployments. This setup slowed feature delivery, impacting the company's agility in responding to customer needs.

The technical issues were multifaceted:

- All environments operated on AWS Elastic Beanstalk, creating limitations in scalability and flexibility.

- The absence of automation led to inefficiencies in builds and deployments.

- Separate infrastructure was needed for each tenant, increasing management complexity.

- Logging and monitoring systems were insufficient, reducing visibility into application performance.

- A workflow for managing migration and cleanup plans was absent, further complicating operations.

Industry
Drone Operations and Compliance

Challenge
High costs, slow feature deployment, and outdated AWS setup

Featured Services
ECS, CloudWatch, Route 53, SNS, EventBridge, EC2, ECR, ALB

DroneLogbook found nClouds to be the perfect partner, as nClouds was capable of delivering the **essential guidance and assistance required to devise and execute a solution** that fulfilled its unique needs.

Why AWS and nClouds

DroneLogbook chose AWS for its robust and scalable cloud services, which offered the flexibility required to modernize its infrastructure. The decision to partner with nClouds stemmed from nClouds' reputation as an AWS Premier Tier Services Partner with deep expertise in cloud migration, automation, and cost optimization.

With a proven track record of delivering high-value solutions aligned with AWS Well-Architected Framework best practices, nClouds was the ideal partner to address DroneLogbook's business and technical challenges.

SOLUTIONS

nClouds implemented a comprehensive solution to modernize DroneLogbook's AWS infrastructure.

Key actions included the following:

1. Infrastructure Modernization

nClouds migrated over 80 Elastic Beanstalk environments to Amazon ECS. Using Terraform for infrastructure as code, the team built a scalable, high-availability architecture.

2. Automation and Deployment

Implementing CI/CD pipelines with Bitbucket streamlined deployments, while cron jobs were automated using AWS EventBridge based on specific client requirements. Docker images were stored in Amazon ECR for seamless integration.

3. Logging and Monitoring

AWS CloudWatch was employed to enhance logging and monitoring capabilities, enabling real-time insights and proactive issue resolution. Notifications were configured using AWS SNS for alerts and deployment updates.

4. Tenant Management

Separate infrastructures were created for each tenant, improving resource allocation and administration.

By following AWS Well-Architected Framework best practices, nClouds ensured that the new infrastructure was secure, reliable, and optimized for performance and cost.

SOLUTIONS

DroneLogbook's new infrastructure leverages the following AWS services:

- **Amazon ECS**
  Managed container service to host applications

- **Amazon CloudWatch**
  Centralized logging and monitoring

- **Amazon Route 53**
  Managed DNS service for routing

- **Amazon SNS**
  Notification service for alerts and deployment updates

- **AWS EventBridge**
  Automated event-driven workflows

- **Amazon EC2**
  Scalable compute capacity for workloads

- **Amazon ECR**
  Repository for Docker container images

- **Application Load Balancer (ALB)**
  Enhanced traffic distribution

Third-Party Providers

- **Bitbucket Pipelines**
  CI/CD workflows

- **Terraform**
  Infrastructure as code for consistent deployments

High-Level Architecture Diagram
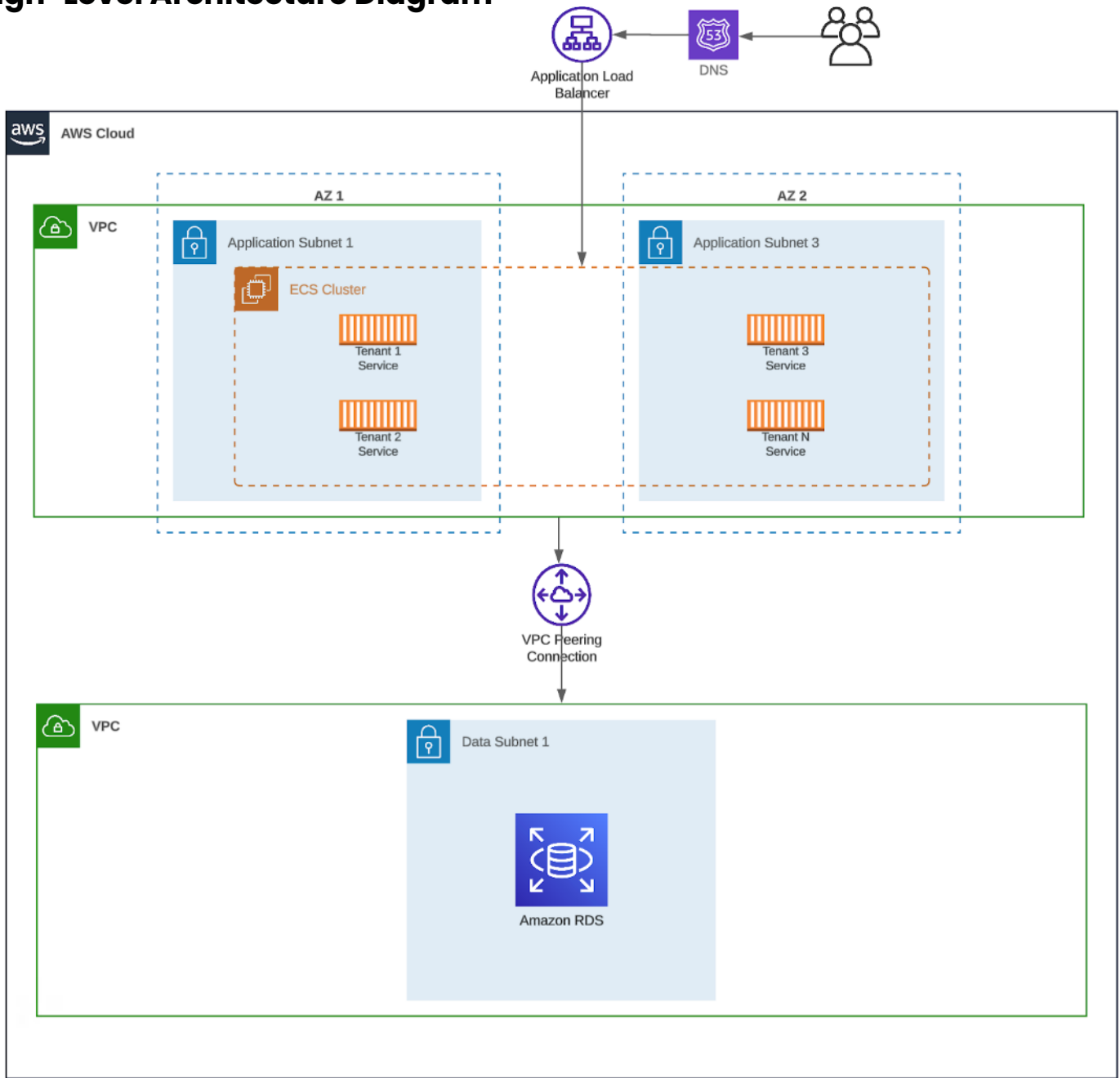
Increased Business Efficiency

Teaming with DroneLogbook, nClouds was able to bring several key benefits through AWS that increased business efficiency and solved its challenges.

BUSINESS BENEFITS

Cost Optimization

- The new architecture reduced operational costs while leveraging modern AWS technologies.

Efficient Management

- nClouds simplified tenant administration and enhanced control over application features.

TECHNICAL BENEFITS

Accelerated Deployments

- Automation reduced deployment time, enabling faster feature releases.

Scalability

- The high-availability infrastructure ensures reliable performance during peak demand.

Enhanced Monitoring

- Improved logging and alerting systems provide better insights and quicker issue resolution.

About nClouds

nClouds is a certified, award-winning provider of AWS and DevOps consulting and implementation services. We partner with our customers as extensions of their teams to build and manage modern infrastructure solutions that deliver innovation faster. We leap beyond the status quo.