AWS Deployment Proposal: Single vs. Multiple Applications

1. Executive Summary

This proposal outlines a fully costed and scalable AWS infrastructure setup for hosting either a single high-performance application or multiple (up to five) web applications. The configuration includes all core services—compute, storage, CDN, CI/CD, logging, and developer tools—with monthly costs including applicable VAT.

2. Purpose

The purpose of this document is to provide technical and financial clarity to enable your organization to confidently approve and deploy one or more production-grade applications on AWS. It supports cost-effective infrastructure provisioning, streamlined CI/CD, security best practices, and developer productivity.

3. Key Benefits

- Scalable backend infrastructure using EC2 and Elastic Beanstalk

- Secure, managed PostgreSQL database with automated backups

- Global CDN via CloudFront for optimal frontend delivery

- Developer productivity powered by GitHub Pro and Copilot Pro

- Auto-deployments with AWS CodePipeline

- Daily monitoring and alerting through CloudWatch

- Domain and DNS management with HTTPS via Route 53 and ACM

4. Services Overview

Service	Purpose
EC2 via Elastic Beanstalk	Hosts backend API or server code. In Option B, can support multiple apps by structuring endpoints, subdomains, or containers.
Amazon RDS (PostgreSQL)	Manages data for one or more apps. Can handle multiple schemas or isolated DBs per app.
Amazon S3 (100GB)	Stores assets (e.g., images, documents). Scalable for multi-app media hosting.
CloudFront CDN (500GB)	Speeds up frontend delivery globally. Shared across apps or domains.
CloudWatch Monitoring	Tracks logs, errors, performance. Covers all apps if centralized.
Route 53 + Domain Name	DNS management and domain hosting. Add subdomains for each app if needed.
CodePipeline (CI/CD)	Automates deployment from GitHub to AWS. Supports single or multiple workflows.

GitHub Copilot Pro	AI assistant for faster, smarter development.

5. Monthly Cost Estimates

Option A: Single High-Performance App

Service	Monthly Cost (USD)
EC2 (t3.large + 60GB SSD)	$60.00
RDS PostgreSQL (db.t3.medium + 100GB)	$50.00
S3 (100GB)	$5.00
CloudFront (500GB)	$40.00
CloudWatch Logs & Metrics	$10.00
Route 53 + Domain	$2.00
CodePipeline (CI/CD)	$2.00
GitHub Pro	$4.00
GitHub Copilot Pro	$10.00
VAT (7.5%)	$13.73

Total Estimated Monthly	$196.73

Option B: Multiple Apps (3–5 Apps)

Service	Monthly Cost (USD)
EC2 (t3.2xlarge + 120GB SSD)	$140.00
RDS PostgreSQL (db.t3.large + 200GB)	$90.00
S3 (200GB)	$10.00
CloudFront (1TB)	$80.00
CloudWatch Logs & Metrics	$15.00
Route 53 + 3 Domains	$4.00
CodePipeline (multi-app CI/CD)	$5.00
GitHub Pro	$4.00
GitHub Copilot Pro	$10.00
VAT (7.5%)	$26.85

Total Estimated Monthly	$384.85

6. Two-Year Cost Summary

Deployment Type	Monthly Total (USD)	2-Year Total (USD)
Single App	$196.73	$4,721.52
Multiple Apps (3–5)	$384.85	$9,236.40

7. Action Items

- Approve monthly infrastructure budget based on app needs

- Allocate annual domain registration (~$12/year per domain)

- Confirm use case: Single App vs Multiple Apps

- Assign development team to initiate deployment

8. Final Notes

This setup is secure, scalable, and cost-effective for web application hosting. It includes all necessary cloud resources, monitoring, and developer tooling. Should needs evolve, services such as ECS (containers), Lambda (serverless), or AWS Reserved Instances can be adopted for long-term savings.