05 / 05 DEVOPS & CLOUDOPS E-COMMERCE TECHNOLOGY

DevOps Transformation for a Scaling E-commerce Platform

A Toronto-based e-commerce platform with $40M in annual GMV was deploying code manually, taking 3–4 hours per release and experiencing frequent production incidents. Engineering velocity had stalled and the team was losing candidates to companies with modern engineering cultures. Algebrix delivered a complete DevOps transformation in 12 weeks.

CLIENT PROFILE	ENGAGEMENT VALUE	DURATION	DECISION MAKER
E-commerce · 120 employees · Toronto	**USD $35,000**	**12 weeks**	**CTO & VP Engineering**

THE PROBLEM

The platform's engineering team of 22 developers deployed to production manually — SSH into servers, copy files, restart services. Each deployment required a Saturday maintenance window, took 3–4 hours of a senior engineer's time, and had a 1-in-4 rollback rate due to environment inconsistencies. Two production incidents in 12 months caused 9 hours of total downtime during peak trading periods. The VP Engineering estimated the team was spending 30% of their capacity on deployment and incident recovery rather than product development. Two prior internal attempts to adopt CI/CD had stalled due to competing priorities.

OUR APPROACH

1 **DevOps maturity assessment**
Assessed the team's current deployment process, infrastructure setup, testing coverage, monitoring, and incident response practices. Produced a 90-day DevOps transformation roadmap with measurable milestones signed off by the CTO before any work began.

2 **CI/CD pipeline implementation**
Built a fully automated CI/CD pipeline using GitHub Actions, with automated unit and integration test runs on every pull request, Docker containerisation for environment consistency, and one-click deployments to staging and production. First automated deployment completed in week 4.

3 **Infrastructure as Code migration**
Migrated all AWS infrastructure from manually managed resources to Terraform, enabling reproducible environment creation, version-controlled infrastructure changes, and identical staging and production environments to eliminate deployment environment drift.

4 **Observability & incident response**
Implemented Datadog APM across all services with custom dashboards, alerting rules, and on-call runbooks. Reduced mean time to detection (MTTD) from 22 minutes to under 3 minutes and established a structured incident response process with blameless post-mortems.

OUTCOMES

18 min
Average deployment time (down from 3–4 hours) with zero manual steps

4×
Increase in deployment frequency — weekly releases replaced monthly windows

30%
Engineering capacity reclaimed from deployment and incident recovery work

TECHNOLOGIES USED

GitHub Actions · Docker · Terraform · AWS ECS · AWS ECR · Datadog APM · PagerDuty · Jest / Pytest · AWS CloudWatch

> *"We had tried to fix our deployment process twice before and failed both times. Algebrix came in with a clear plan, embedded with our team, and actually got it done. Within 12 weeks our engineers went from dreading deployments to doing them every day without thinking about it. The impact on morale alone was worth the investment."*

— VP Engineering, E-commerce Platform · Toronto, Canada (Illustrative)

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