Modernizing cloud with EKS, CI/CD, and Seamless Production Workload Migration on AWS

THE PATTERN

The Pattern is an astrology-based mobile app offering deeply personalized self-understanding and insight into your life cycles, plus compatibility analysis with others through "Bonds." It helps you feel seen, understood, and empowered to connect more meaningfully.

Executive Summary

The Pattern is a popular self-discovery and astrology platform that blends data-driven insights with behavioral intelligence to offer users personalized guidance and deeper self-awareness. With a rapidly growing user base and expanding feature set, The Pattern required a secure, scalable, and automated cloud infrastructure to support both innovation and operational resilience.

To meet these demands, The Pattern partnered with binbash to modernize and optimize its AWS environments. This included enhancing the existing non-production environment, building a new production environment from the ground up, and executing a seamless migration of data and application workloads from the legacy production account to the new, best-practice-aligned AWS infrastructure.

Customer Challenge

As The Pattern scaled, their engineering team faced several infrastructure and delivery challenges:

The non-production environment, initially deployed using Terraform, presented opportunities for improvement in Kubernetes (EKS) configuration and infrastructure modularity.

The existing production environment needed to be replaced with a newly built, secure, and scalable AWS account following best practices.

CI/CD workflows lacked standardization and needed to be redefined for automation, security, and multi-environment consistency.

A seamless, low-risk migration of data and application workloads from the old production account to the new one was critical to ensure business continuity.

To overcome these challenges, The Pattern engaged Binbash to drive a holistic infrastructure modernization effort, supported by strong DevOps automation and AWS expertise.

We brought binbash onboard to bolster our DevOps and IT infrastructure. They migrated our environments to AWS EKS, revamped our CI/CD pipelines, implemented secure and scalable infrastructure, and boosted observability and autoscaling. Their organization, responsiveness, and strong collaboration made this engagement extremely valuable.

**Kaitlyn Anderson - Engineering Manager**
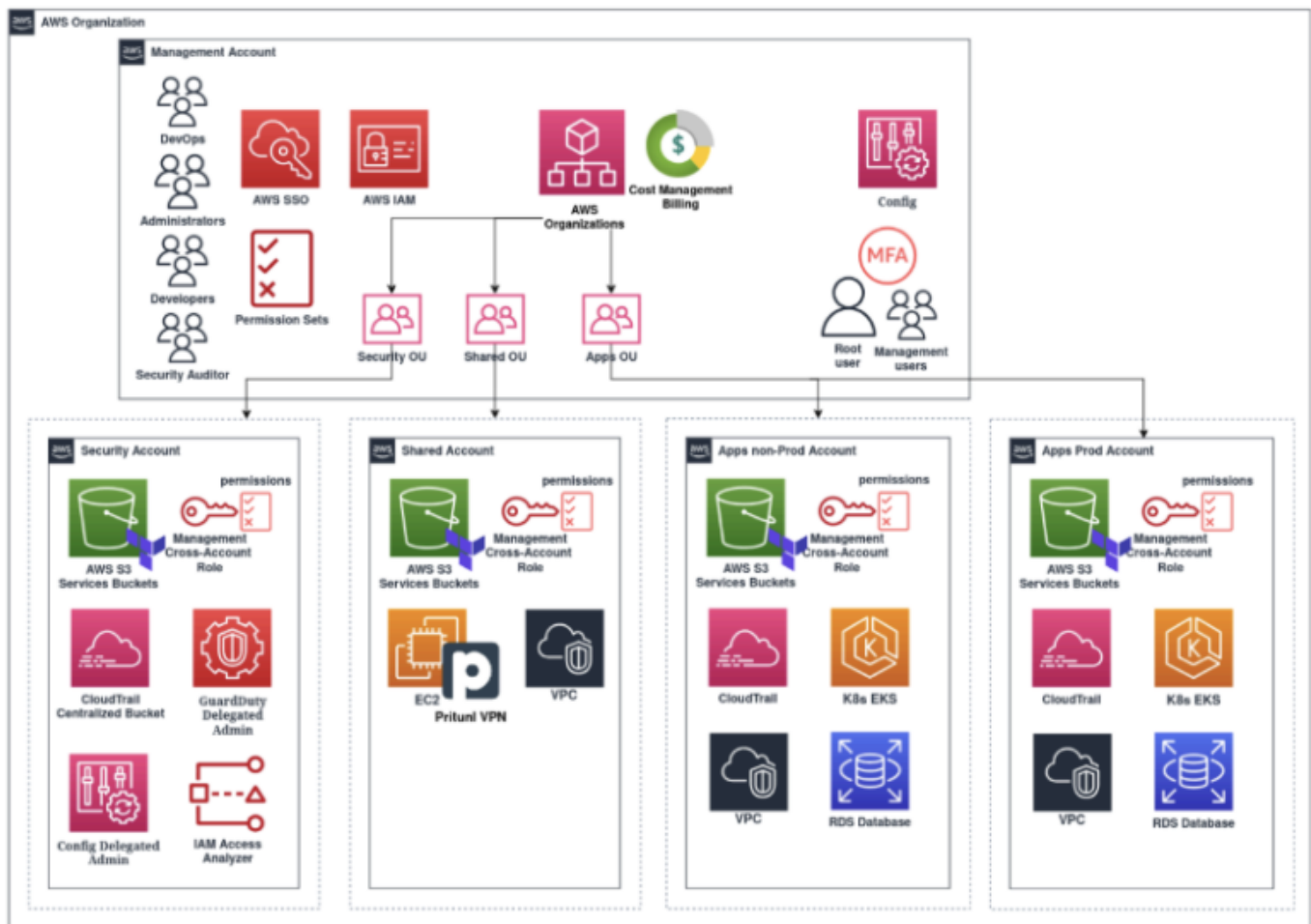
Solution

binbash implemented a phased strategy to deliver a resilient, future-ready cloud environment:

1. **Non-Production Optimization:** Reviewed and improved the non-prod EKS and Terraform setup, rebuilding the cluster for better scalability and maintainability.
2. **New Production Environment:** Provisioned a secure, scalable AWS production account from scratch using Binbash's Leverage™ and Terraform.
3. **CI/CD Modernization:** Apply improvements to GitHub Actions workflows and FluxCD, enabling automated, GitOps-based Kubernetes deployments across environments.
4. **Workloads Migration:** Seamlessly migrated data and EKS workloads from the legacy production account with minimal downtime.
5. **Security & Observability Enhancements:** Implemented IRSA, External Secrets, cert-manager, and centralized logging to meet production-grade standards.

Key Components of the Solution

- **Multi-Account AWS Structure:** New production account built with secure boundaries and best practices.
- **Terraform & Binbash Leverage™:** Used to standardize infrastructure deployment, reduce complexity, and speed up delivery.
- **EKS Cluster Deployments:** Rebuilt non-prod and launched production clusters with GitOps support.
- **CI/CD Pipelines:** GitHub Actions integrated with FluxCD for multi-environment Kubernetes deployments.
- **Security & Compliance:** IRSA, External Secrets, ingress controllers, cert-manager, and automated scaling.
- **Migration Strategy:** Seamless transition of application workloads and data from old to new production account.

binbash
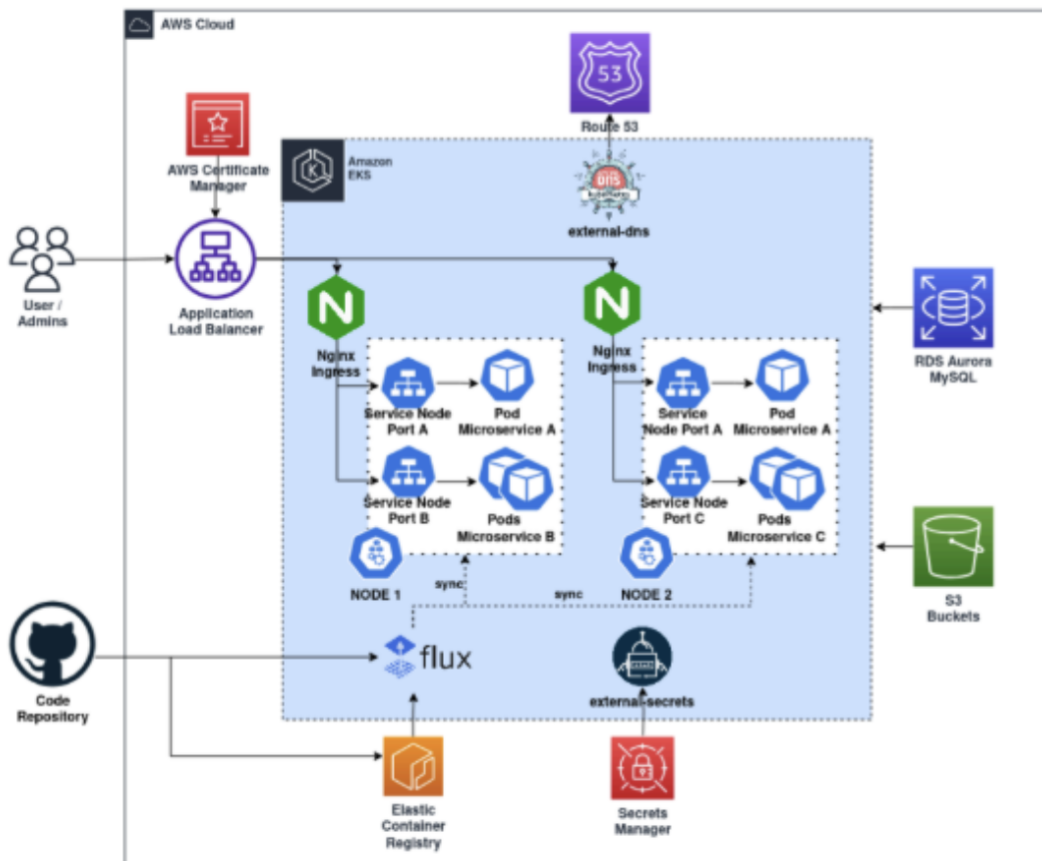
Results
✅ Fully modular and scalable AWS infrastructure for both non-prod and prod environments

✅ CI/CD pipelines with GitOps automation, enabling faster and safer deployments

✅ Seamless migration of production workloads and data with zero major service disruption

✅ Enhanced security posture and operational observability across environments

✅ Future-ready platform aligned with the AWS Well-Architected Framework

Key Milestones
- **Audit & Enhancement of Non-Prod Environment:** Rebuilt EKS and modular Terraform setup
- **New Production Account Provisioned:** Built from scratch using Binbash Leverage™
- **CI/CD Migration:** Github Actions workflows improvement and FluxCD integrated
- **Data & Workload Migration:** Executed smooth cutover from legacy production environment
- **Security and Observability Layer:** Implemented production-grade tooling for logging, scaling, and secrets management

Conclusion
binbash helped The Pattern modernize its AWS infrastructure by not only optimizing the existing non-pro-duction setup but also building a new production environment aligned with AWS best practices. Their team ensured a seamless migration of critical data and application workloads from the legacy account—enabling The Pattern to scale confidently, release faster, and operate securely. Leveraging Infrastructure-as-Code, the Binbash Leverage™ reference architecture, and the AWS Well-Architected Framework, The Pattern now benefits from a robust, secure, and automated cloud foundation that supports long-term innovation and resilience.