



Accelerating Cloud-Native Scalability: Celes' Seamless Transition to AWS and EKS Enablement

Executive Summary

Celes is a technology company revolutionizing the e-commerce and logistics space in Latin America. Their platform integrates AI-powered data intelligence with digital commerce operations, helping large retailers and brands optimize pricing, availability, and fulfillment. With rapid expansion and increasing complexity in infrastructure needs, Celes partnered with Binbash to architect and deploy a robust cloud foundation that supports agility, scalability, and compliance in line with AWS best practices.

Customer Challenge

Celes faced key infrastructure challenges as they scaled:

- Limited cloud governance and standardization across workloads.
- A need for secure, scalable infrastructure to support rapid product iteration.
- Fragmented DevOps workflows and manual infrastructure provisioning.
- A requirement to adopt cloud-native patterns and best practices while retaining agility.

Celes was preparing to migrate its infrastructure from a previous cloud provider to AWS and needed a strong development environment on the new platform. The objective was to ensure a smooth transition while consolidating operations, reducing risk, and laying the groundwork for future scalability—without introducing unnecessary complexity or service disruption.

Solution

To address these needs, Binbash designed and implemented a production-grade AWS Landing Zone and a Kubernetes-based development platform within a single AWS account dedicated to Celes' development environment. The deployment leveraged the Binbash Leverage™ reference architecture, AWS native tools, and infrastructure-as-code principles to ensure automation, security, and scalability.



Celes is a leading AI platform in Latin America that transforms how retailers and distributors manage their supply chains. With a full suite of solutions, it automates purchasing and distribution using accurate demand forecasting. From inventory optimization and stock transfers to replenishment and analytics, Celes lets businesses manage operations efficiently on one platform. It helps reduce waste, avoid stockouts, and boost profitability through automation and user-friendly tools.

Designed for fast implementation and scalability, Celes adapts to existing workflows and delivers measurable results from day one. Trusted by major brands, it continues to lead digital transformation in retail and consumer goods across the region.



What impressed me most was their rigorous DevOps discipline combined with deep AWS expertise. From day one, the project was laid out in a crystal-clear SOW with highly detailed tasks, and every deliverable was accompanied by well-structured, easy-to-understand documentation—making onboarding and handoffs seamless.

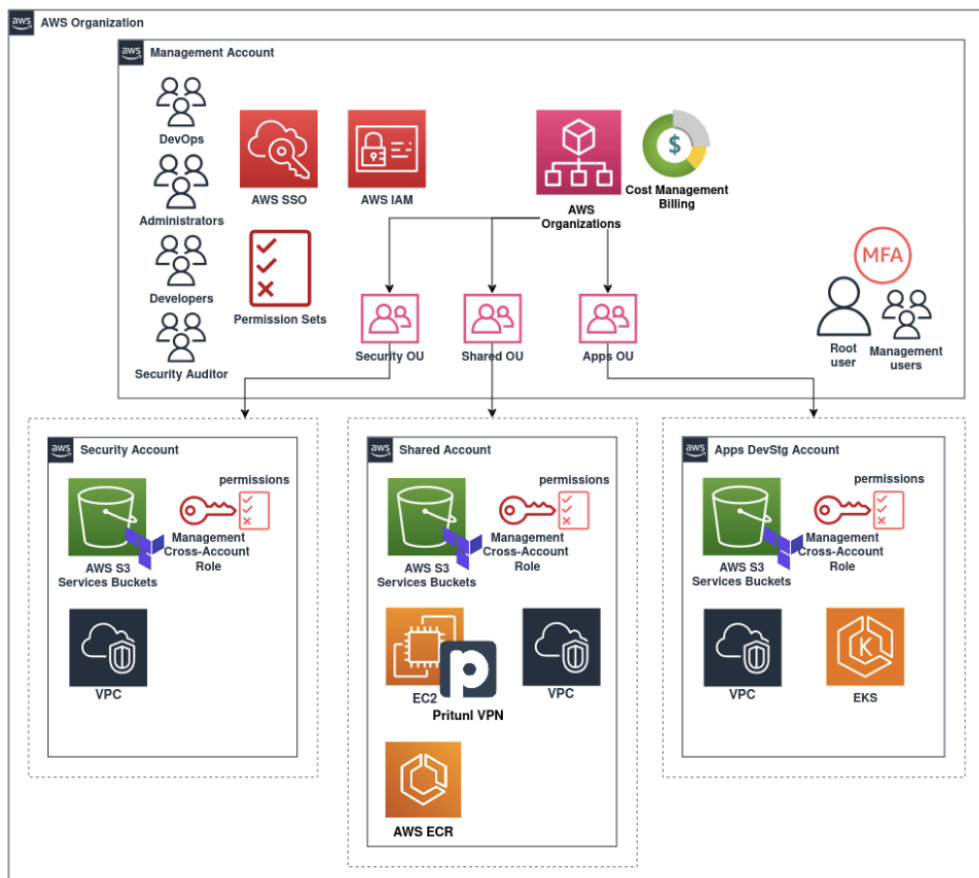
David Florian - CTO



Core Components of the solution

- A multi-account **AWS Organization** with accounts for management, shared services, and security, while consolidating all development workloads into a single **Apps-Dev** account.
- Deployment of a **fully configured Amazon EKS cluster** within the development account, with Kubernetes best practices for workload isolation and lifecycle management.
- Setup of **CI/CD** pipelines using **ArgoCD**, **Argo Workflows**, and **Argo Image Updater** to enable **GitOps** for both frontend and backend services.
- Full **infrastructure-as-code** provisioning using **Terraform**, along with robust secrets management, security baselines, and centralized identity management via **AWS Identity Center (SSO)**.
- Secure internal access with a hardened **Pritunl VPN** instance.

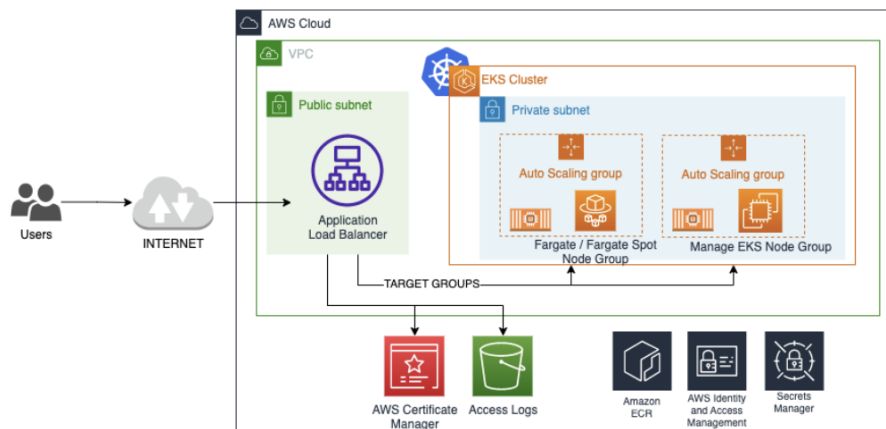
binbash also collaborated with the **AWS Startups team**, who fully covered the project investment through startup program credits.





Key Components of the solution

- **AWS Landing Zone Setup** AWS accounts for management, shared services, and security were created and integrated with governance controls via AWS Organizations and SCPs.
- **Centralized IAM & SSO** AWS Identity Center was configured for user access and permission sets across all accounts, streamlining secure access for both Celes and Binbash teams.
- **Networking Design** VPCs were provisioned with appropriate subnets, NAT gateways, and peerings between shared and development resources to isolate traffic and improve reliability.
- **Security Baseline** Organization-wide configurations included default encryption, IAM Access Analyzer, CloudTrail, GuardDuty, and strong password/MFA enforcement.
- **Amazon EKS for Development** The Kubernetes cluster was deployed using managed spot instances in the Apps-Dev account to reduce costs while maintaining scalability.
- **CI/CD with Argo Suite** ArgoCD, Argo Workflows, and Argo Image Updater enabled a GitOps-based approach to continuous delivery and integration for selected backend and front-end apps.
- **Secrets & VPN Access** Secrets were securely managed with AWS Secrets Manager and integrated into Kubernetes using External Secrets. Prituni VPN provided secure access to private resources without exposing endpoints publicly.
- **Terraform Automation** Infrastructure was modularly codified with Terraform, leveraging Binbash Leverage™ modules to ensure fast, repeatable, and well-architected deployments.





The **binbash Leverage™** reference architecture and pre-built modules greatly accelerated implementation timelines while ensuring compliance and flexibility.

Results

The engagement resulted in measurable improvements in infrastructure quality, developer productivity, and operational readiness:

- ✓ Seamless migration of development infrastructure and workloads from a previous cloud provider to AWS, without service disruption.
- ✓ Unified development environment in a secure and scalable AWS setup.
- ✓ Automation of CI/CD workflows, enabling faster, safer code delivery.
- ✓ Improved security posture, with enforced policies, encryption, and access logging.
- ✓ Cost optimization through spot instances and centralized services.
- ✓ Zero-cost implementation due to AWS Startup Program funding.

Key Milestones

- **Migration Planning and Onboarding** Conducted architectural design sessions and infrastructure preparation to ensure a smooth migration path from the previous cloud environment to AWS.
- **AWS Landing Zone Setup** Creation of AWS Organization, development of management, shared, and security accounts, and implementation of centralized governance and IAM controls.
- **EKS Cluster Deployment** Provision of Amazon EKS within the single development account, along with necessary IAM roles, Kubernetes add-ons, and observability tools.
- **CI/CD Enablement** Implementation of GitOps pipelines using Argo Workflows and ArgoCD for selected frontend and backend services.
- **Security & VPN Configuration** Deployment of secure networking, secrets management, and VPN access with hardened infrastructure.

Conclusion

With **binbash** leading the cloud migration and infrastructure rollout, Celes successfully transitioned from its previous cloud platform to a modern, secure, and scalable environment on AWS. The entire deployment was built using the Binbash Leverage™ reference architecture and aligned with the AWS Well-Architected Framework, ensuring a robust foundation for long-term growth. Today, Celes is positioned to innovate faster, scale confidently, and operate with improved security, governance, and efficiency.