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Accelerating Cloud-Native Data Analytics in E-Commerce

Executive Summary

Ximple, a fintech innovator based in Latin America, operates at the intersection of embedded finance and e-commerce. Their core business centers around providing streamlined financial solutions to retailers and marketplaces, enabling seamless credit services and integrations across digital commerce platforms.

As a rapidly scaling startup, Ximple required a robust, scalable data infrastructure to support its expanding analytics needs and data-driven decision-making across partner ecosystems.

Customer Challenge

To deliver on its vision of a modern, intelligent financial platform, Ximple needed to:

- Consolidate and process high volumes of semi-structured and unstructured data from diverse sources.
- Enable flexible, real-time data analytics to empower internal teams and partners.
- Lay the groundwork for compliance with data governance and security best practices.

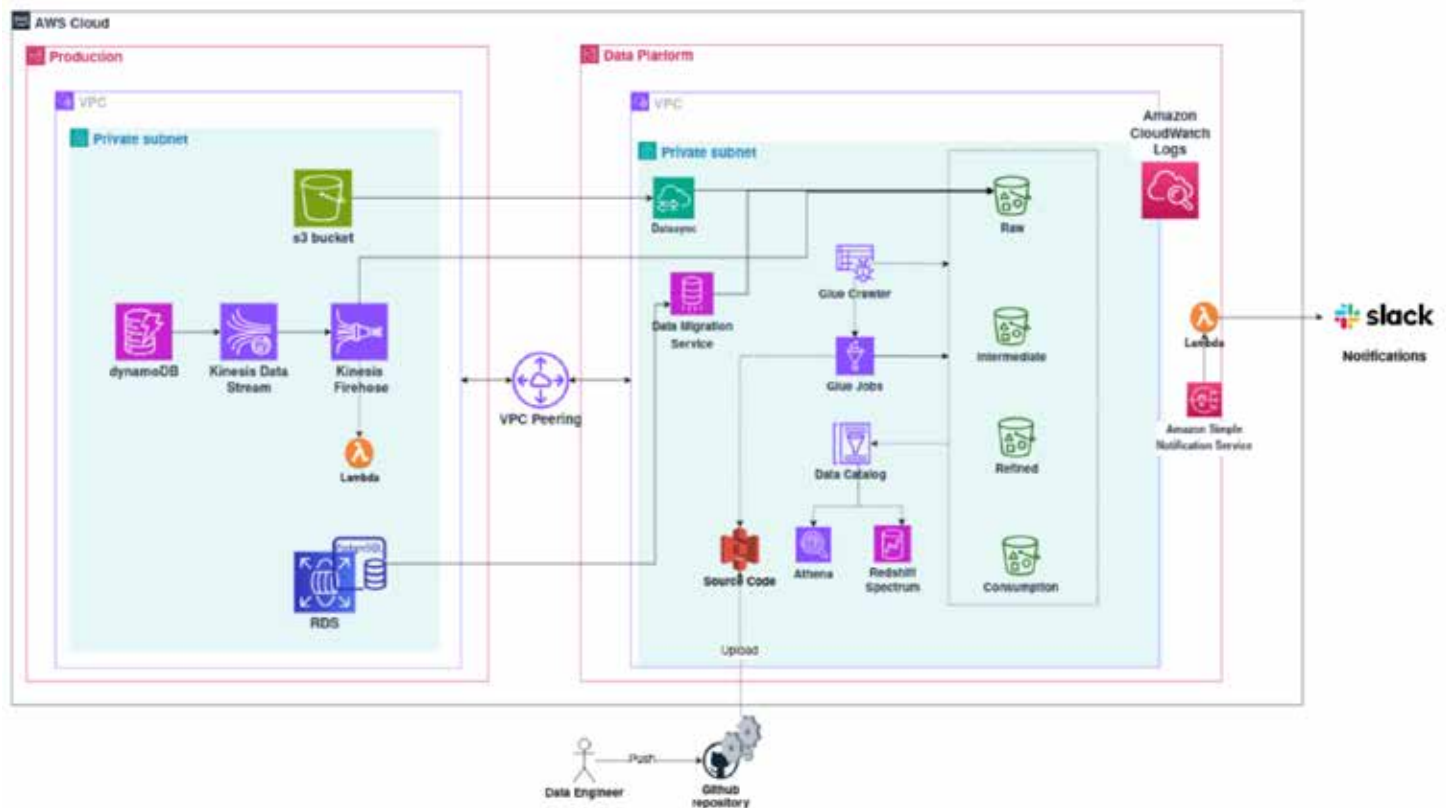
With limited internal cloud expertise and an aggressive timeline, Ximple partnered with **binbash** to design and implement a foundational AWS Lakehouse architecture.

Solution

binbash architected and deployed a tailored AWS Lakehouse solution, leveraging their proprietary Leverage™ framework and AWS reference architectures to accelerate infrastructure delivery. The engagement included:

Ximple

Ximple is a fintech company based in Latin America, focused on revolutionizing the embedded finance space for digital commerce. It provides integrated financial infrastructure that empowers retailers, marketplaces, and e-commerce platforms to offer seamless credit, payments, and banking experiences to end users. Through its APIs and platform tools, Ximple enables partners to streamline financial transactions and unlock new revenue streams, fostering greater accessibility to credit in emerging markets.



- **Lakehouse Foundation:** S3 storage zones (raw, intermediate, refined, consumption), organized with Glue crawlers and cataloging, supporting multi-stage ETL jobs with Athena and Redshift Spectrum integration.
- **Ingestion Pipelines:** DynamoDB Streams and Kinesis Firehose for real-time data ingestion; DataSync and AWS DMS for batch migrations from relational sources (RDS and others).
- **Processing & Querying:** Glue jobs process raw data into intermediate and refined stages. Queries are executed via Athena and Redshift Spectrum, using data cataloged in AWS Glue.
- **Security & Compliance:** Implementation of VPCs, KMS encryption, IAM role configurations, and minimal-privilege design.

The deployment was co-funded via the AWS Startups Program, reducing total cost through approved incentives.

Key Components of the Solution

- **Multi-account setup:** Dedicated accounts for data-science workloads, peer-connected with staging and production environments.
- **Infrastructure as Code (IaC):** Terraform modules from binbash's `le-tf-infra-aws` repository.



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- **CI/CD & Monitoring:** GitHub-based workflows, Slack-integrated Lambda/SNS alerting, and Glue crawler automation.
- **Compliance Alignment:** Infrastructure aligned with SOC2 and ISO27001 best practices; future PCI DSS and HIPAA compliance-ready.
- **Documentation:** Full technical runbooks, IaC README modules, and centralized DevOps knowledge base.

Results

- **Time to Deployment:** Functional AWS Lakehouse delivered in < 90 days, including multiple ingestion pipelines.
- **Operational Efficiency:** Automation reduced manual effort by 60% across ETL and provisioning tasks.
- **Scalability:** Architecture scales horizontally to support increased data velocity and volume.
- **Team Enablement:** Internal Ximple engineers onboarded and trained to operate, maintain, and extend the solution independently.
- **Cost Optimization:** Leveraging AWS Startup Program credits, binbash significantly reduced infrastructure costs, allowing Ximple to maximize the value of its investment while accelerating cloud adoption.

Key Milestones

- **Technologies:** AWS S3, Glue, Athena, Redshift Spectrum, DMS, DynamoDB, Firehose, Lambda, SNS, Terraform, GitHub.
- **Compliance:** SOC2-aligned design, ISO27001 practices, encryption via KMS.
- **Architecture:** Multi-account setup, Leverage™ IaC modules, VPC peering, modular S3 zones.
- **Outcomes:**
 - Sub-3 month delivery
 - Reduced infrastructure costs
 - Future-ready for PCI DSS, HIPAA, and advanced ML/AI workloads



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Conclusion

The partnership between **binbash** and **Ximple** successfully delivered a production-grade **AWS Lakehouse** platform tailored to the unique challenges of fintech and embedded finance. This strategic infrastructure empowers Ximple to drive **high-performance analytics**, maintain security and compliance, and scale with confidence across multiple markets.

By combining cloud-native technologies with binbash's proven Leverage™ framework, Ximple now has a **future-ready data foundation** to support its innovation roadmap and long-term business growth.