



# Modernizing a Care Coordination Platform: Automated Data Migration from Aptible to GCP AlloyDB

Seamless migration of multiple care coordination workloads from Aptible to Google Cloud Platform using a fully automated, low downtime AlloyDB migration framework



Google Cloud  
Partner

CASE STUDY



## Client Challenge

A large healthcare technology organization operates a care coordination platform comprised of multiple interconnected applications, all dependent on timely, accurate, and highly available patient and care transition data. As the organization initiated a major infrastructure modernization effort - transitioning from Aptible to Google Cloud Platform (GCP) - several operational and scalability challenges surfaced.

Manual, Terraform based provisioning significantly slowed deployments and delayed environment readiness. The lack of dynamic scaling constrained onboarding capacity, directly impacting growth across mission critical workloads. Replication gaps introduced the risk of data loss, threatening the reliability of clinical and operational workflows.

The migration effort also required handling large, complex, multi table PostgreSQL datasets that depended heavily on manual validation - raising operational effort and increasing the risk of data integrity issues. With decommissioning deadlines approaching for the legacy platform, the organization required a repeatable, reliable, and low downtime migration approach to maintain strict SLAs and avoid service disruption. Collectively, these constraints created scalability bottlenecks and limited progress on cloud modernization initiatives.



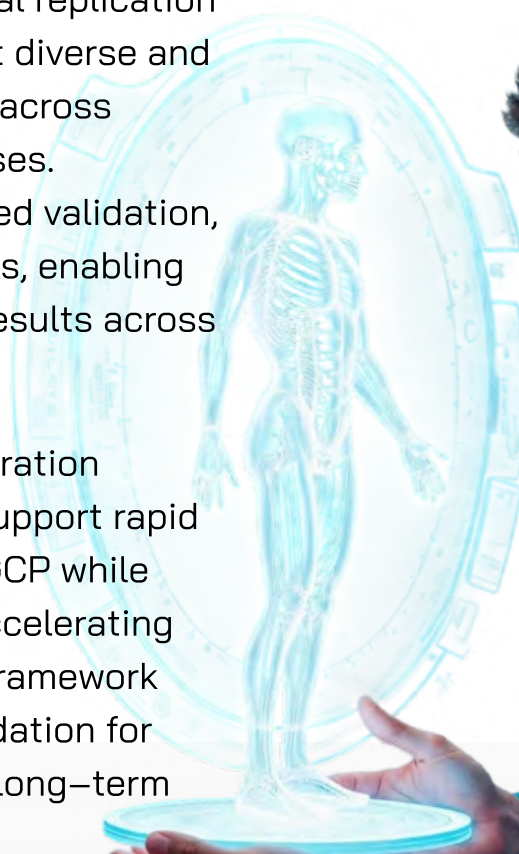
## CitiusTech Solution

CitiusTech partnered with the organization to design and implement a fully automated, low-downtime data migration and provisioning framework that ensured accuracy, resiliency, and service continuity while accelerating cloud adoption.

The infrastructure provisioning approach was modernized by redesigning the setup using SpaceLift and OpenTofu, enabling dynamic and automated AlloyDB deployments across all application workloads. Hundreds of lines of fragmented Terraform configurations were consolidated into a single, unified template, drastically reducing complexity and improving maintainability.

To ensure lossless and accurate migration, PostgreSQL logical replication was implemented to support diverse and evolving schema structures across multiple application databases. Automated workflows handled validation, seeding, and integrity checks, enabling consistent and repeatable results across migration cycles.

A reusable, end-to-end migration pipeline was developed to support rapid transitions from Aptible to GCP while minimizing downtime and accelerating production readiness. This framework established a scalable foundation for ongoing modernization and long-term GCP expansion.



## Key Highlights of the Solution

- Redesigned provisioning using SpaceLift and OpenTofu for dynamic, automated AlloyDB deployments
- Consolidated hundreds of Terraform lines into a single unified, intelligent template
- Implemented PostgreSQL logical replication for schema-compatible, lossless migrations
- Automated validation, re-seeding, and integrity checks to ensure consistent accuracy
- Built a reusable end-to-end migration pipeline to minimize downtime and speed deployments
- Established a scalable provisioning foundation to support ongoing cloud modernization

## Value Delivered

### Business Value:

- Ensured uninterrupted access to accurate patient and care coordination data
- Reduced migration risk through a repeatable, low-impact process
- Enabled scalable growth and supported long-term modernization initiatives

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### Technical Value:

- 92% reduction in downtime, cutting cutover from six hours to thirty minutes
- 98% reduction in configuration footprint, simplifying provisioning from ~900 LOC to ~15
- 80–90% faster environment provisioning across Development, Staging, and Production



## About CitiusTech

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