



## CASE STUDY

# Cloud-Native Healthcare Data Platform Transformation Using AWS and DataOps

Mactores helped CitiusTech accelerate healthcare analytics by migrating its Hscale platform to AWS, improving performance, scalability, and compliance.

## Case Study Summary

- Successfully migrated CitiusTech's legacy Hscale platform to a modern, cloud-native stack on AWS.
- Enhanced analytics and reporting using Amazon EMR, S3, Athena, Redshift, and Kinesis.
- Ensured HIPAA and SOC 2 compliance with stringent IAM, encryption, and VPC configurations.
- Delivered optimized Spark/Hive-based ETL pipelines and integrated real-time streaming capabilities.
- Improved performance and reduced operational costs by adopting elastic infrastructure.

## About The Customer

### CitiusTech

CitiusTech is a healthcare analytics leader with 30+ years of experience in enabling healthcare payers, providers, and payviders to generate measurable impact. Their SaaS solutions operate on a data-fabric-enabled cloud platform with a strong focus on advanced data orchestration and interoperability. CitiusTech empowers organizations to improve clinical, operational, and financial outcomes, uncovering millions of dollars in savings annually.



## Customer Situation

CitiusTech was limited by its on-premises infrastructure, which struggled to scale and perform under the growing volume and complexity of healthcare data. Key challenges included:

- Performance bottlenecks in data processing workflows.
- High operational costs due to rigid infrastructure.
- The need to comply with healthcare-specific regulations like HIPAA and SOC 2.
- Insufficient analytics capabilities to support evolving customer expectations.

CitiusTech required a future-ready cloud-native platform to address these challenges and fuel further innovation.

*“With Mactores’ AWS-native solution and automation-first approach, we gained the scale, performance, and security foundation to drive better healthcare outcomes and enable our teams to innovate faster.”*

- Gajanan Kabe  
Vice President IT @ CitiusTech



## Our Approach

Mactores engaged with CitiusTech's data and IT teams to:

- Design and implement an AWS-based solution centered around Amazon EMR for scalable, managed big data processing.
- Migrate data to Amazon S3, creating a durable and scalable central data lake.
- Optimize ETL pipelines using Apache Spark and Hive on EMR to accelerate data transformation.
- Integrate with AWS ecosystem including:
  - Amazon Redshift for data warehousing.
  - Amazon Athena for interactive querying.
  - Amazon Kinesis for real-time streaming.

- Ensure compliance and security through:
  - Identity and Access Management (IAM).
  - Encryption at rest and in transit.
  - VPC configurations for network isolation.

## Business Outcomes

- **Performance Boost:** Data processing speed and platform responsiveness significantly improved.
- **Operational Efficiency:** Elastic scaling of resources on AWS cut infrastructure costs.
- **Faster Insights:** Dashboards and reports were generated twice as fast, accelerating decision-making.
- **Sales Enablement:** Enhanced analytics capabilities empowered presales teams to deliver compelling real-time demos.

With these results, CitiusTech was better positioned to serve healthcare clients and innovate in regulated environments.

# Technical Outcomes

- **Modernized Architecture:** Entirely migrated to AWS with a scalable, cloud-native platform.
- **Automated Deployments:** Infrastructure-as-Code (IaC) enabled rapid recreation and scaling of environments.
- **Integrated DataOps:** Seamless orchestration across services with real-time data flow.
- **Governance & Security:** Full compliance with HIPAA/SOC 2 supported via secure IAM policies and encrypted data channels.



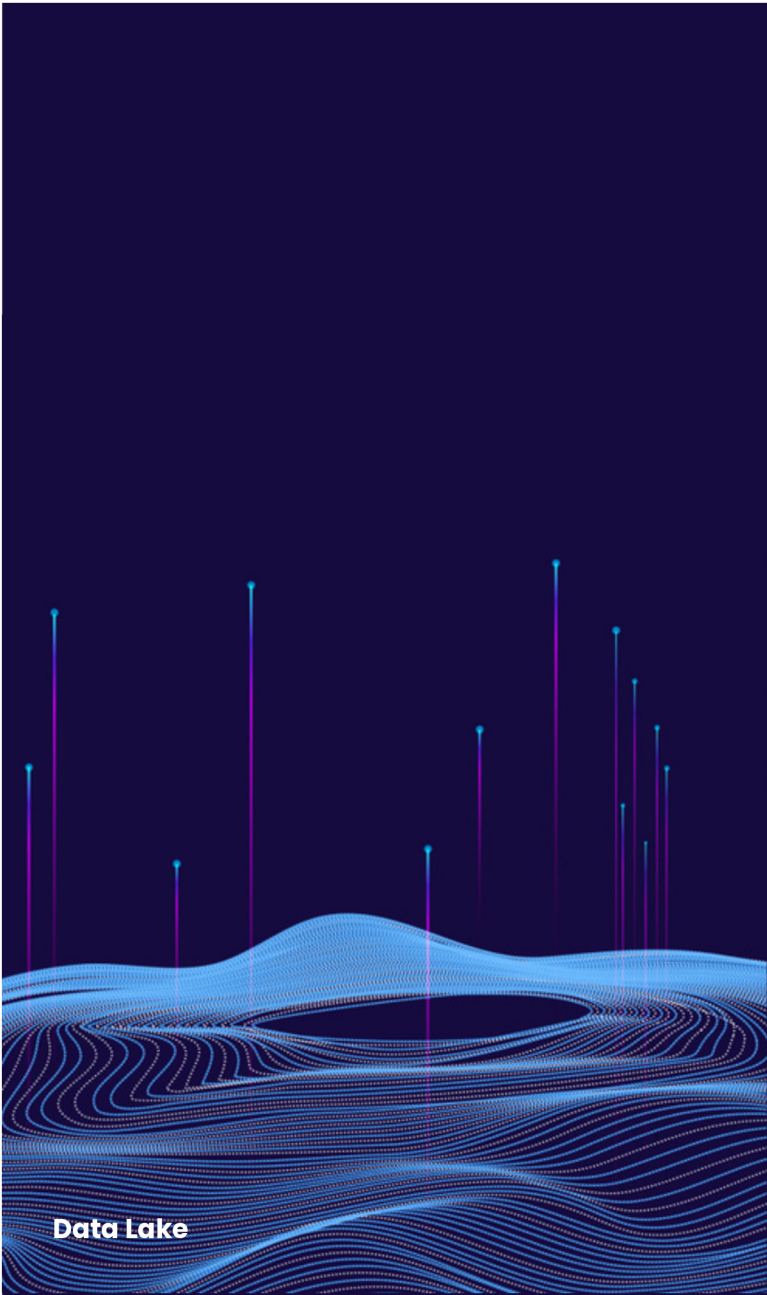
## Getting Started

The project began with:

- Assessment of legacy infrastructure and workloads to identify scaling, security, and modernization gaps.
- Collaborative design sessions between Mactores architects and CitiusTech's teams to align technical goals with regulatory needs.
- Phased migration and deployment of Hscale on AWS, with a strong emphasis on automation, data integrity, and testing.
- Post-migration enablement: Training internal teams on using EMR, Redshift, Athena, and governance controls effectively.

This approach ensured a smooth transition while setting the foundation for long-term success in healthcare data operations.

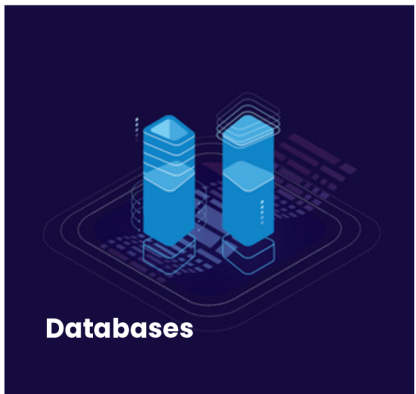
Our  
Solutions



Data Lake



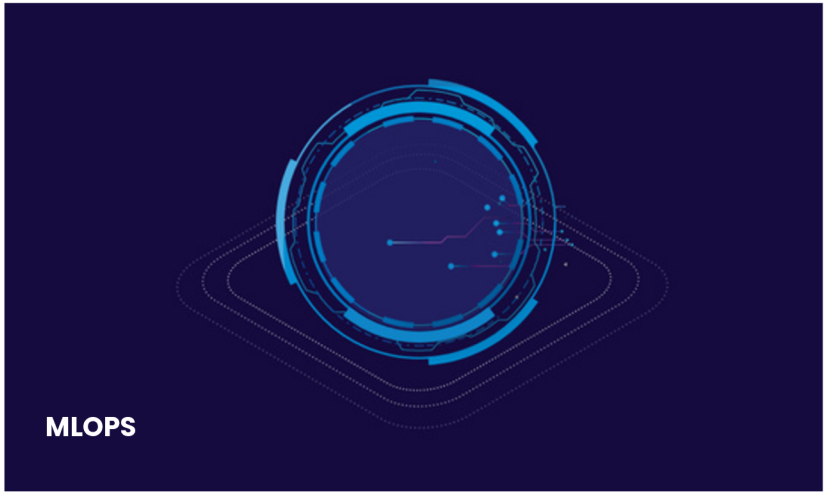
Data Lake



Databases



Data Ops



MLOPS

## Our Process

### Digital transformation via assessments, migration or modernization

We work alongside your tech team to assess and strategize what you need and how to implement the right data solutions on time, on budget and with c-suite buy in.



#### Assess

- Discovery Automation
- Future State Assessment
- GAP Analysis
- End State
- Road Map
- TCO



#### Migrate

- Strategy
- Execution
- Migrate
- Migration Acceleration



#### Modernize

- StrategyFuture State
- Design
- Build
- Automate

# AWS Validated Competencies



# AWS Validated Service Deliveries



[\*\*www.mactores.com/lets-talk\*\*](http://www.mactores.com/lets-talk)

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