



## CASE STUDY

# Branded payments leader retired technical debt

Blackhawk modernized its database and retired its technical debt by migrating from Microsoft SQL Server DB to PostgreSQL. Blackhawk will now operate at 20% of the cost of running the operations compared to running it on Microsoft SQL. This enabled 3x additional scalability by completing this migration.



## Case Study Summary

- AWS schema comparison, data modeling, database migration
- Migrate ETL jobs from SSIS to Amazon Glue
- Migrate data from Microsoft SQL Server to Amazon Aurora PostgreSQL using Amazon DMS and compare datasets using DB Solo

# About The Customer



Blackhawk Network delivers branded payment programs to help meet today's most challenging business objectives. They operate in the prepaid, gift card, and payment industries, selling branded physical and digital gifts, phones, prepaid debit, and incentive cards online and through a network of global retailers.





## Customer Situation

Blackhawk built their Marketplace Application in 2005 in Java Hibernate and MSSQL as a backend. It would consume USD\$ 900,000 worth of MSSQL and Windows licensing and AWS infrastructure fee year on year.

This MSSQL database had about three applications ingesting data into it; 4 applications and a BI platform would take the data out of it.

During the holiday season, the application would query about 3 to 5 million daily queries, which is almost the 4x volume.



*“Mactores is very detailed and great to work with and they are very knowledgeable in all AWS services.”*

*-Bipin Velkur, Senior Director of Engineering*



## Our Approach

Mactores DB Migration team did a source code assessment on the Blackhawk application code and DB object code, such as stored procedures, views, and functions.

The team converted the schema from MSSQL to PostgreSQL using AWS SCT and migrated the data using AWS DMS for one-time migration and ongoing changes to ensure a near-zero cutover window. DB Object code was converted using AWS SCT and Mactores CodeConverter to ensure that it supports the PostgreSQL schema.

Mactores CodeAnalyzer analyzed the code and recommended the changes that needed to be done on the application source code side to make sure the code was compatible with PostgreSQL. All the SSIS packages were moved to Amazon Glue.

## Business Outcomes

Blackhawk will achieve 60% code optimization and 4x improvement in performance as an outcome of this migration.

## Technical Outcomes

Since Blackhawk migrated from Microsoft SQL Server from EC2 instances to Amazon Aurora PostgreSQL serverless, they experienced 4x performance with a 70% reduction in operational efforts due to the serverless database.

This enabled optimizing the cost of operations by 60%.

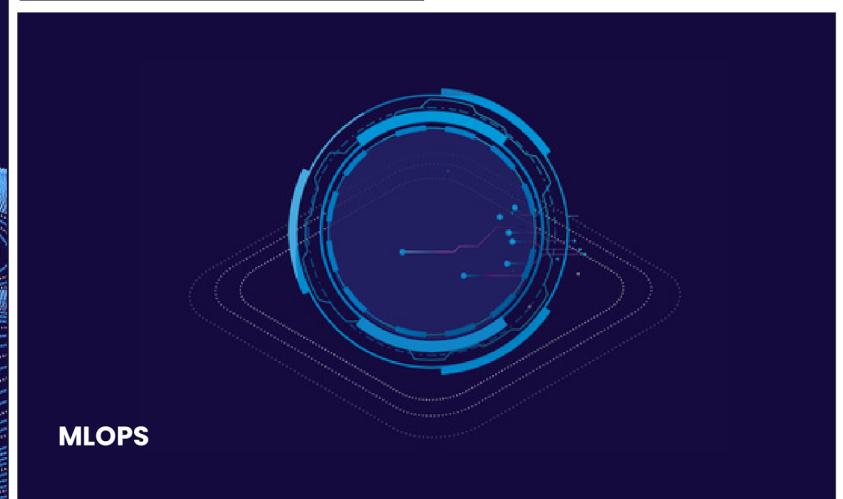
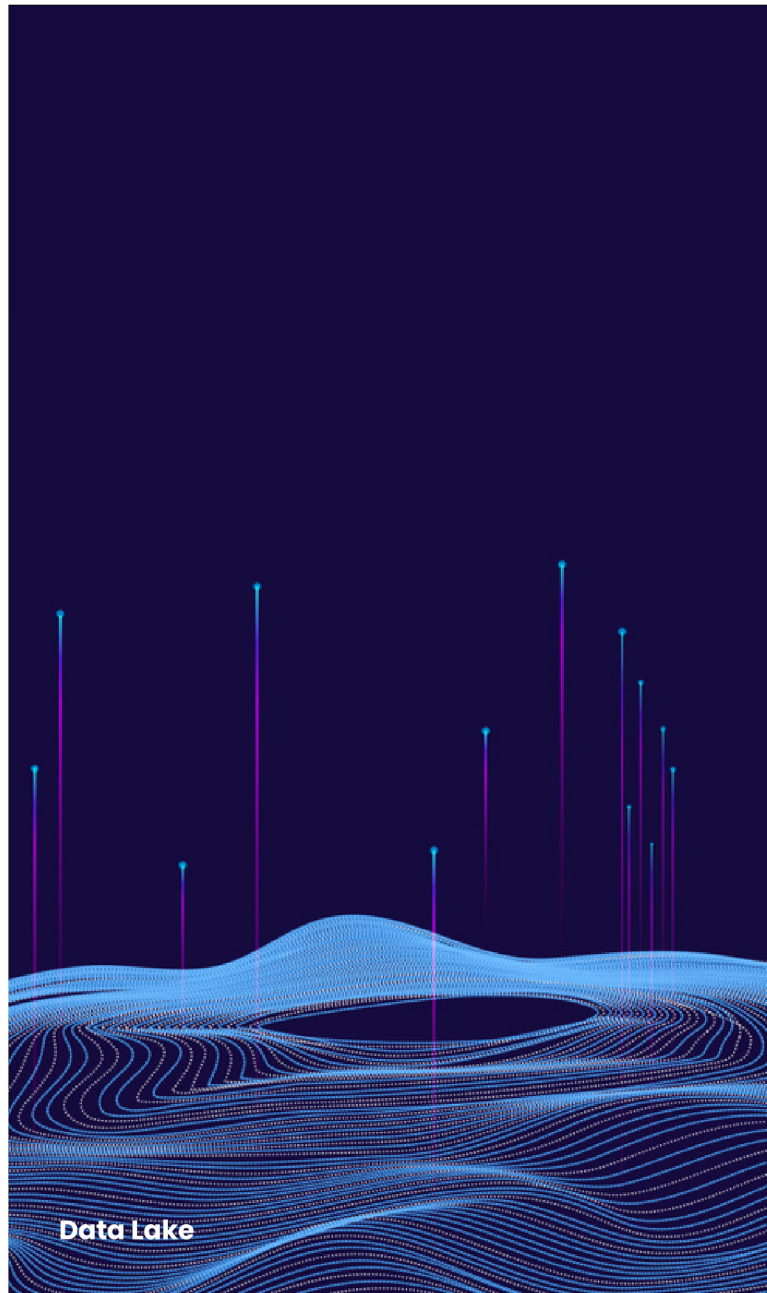


## Getting Started

Blackhawk started with an immersion day to discuss their situation, which led to a 2-day workshop to ideate the path forward for Blackhawk's situation.

This workshop led to a four-week Proof of Concept, and upon the success of the POC, Blackhawk accelerated their migration using Mactores Accelerators in 16 weeks.

Our  
Solutions





## 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



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