CASE STUDY

Online Gaming Giant achieves enhanced gaming experience

Leading mobile gaming provider in Singapore with 10 Million hourly active users faced the challenge of managing high throughput of user behavior data, interactions, and game telemetry. Mactores enhanced Nazara's ARPU (Average Revenue Per User) by 30% by implementing support for real-time analytics with AI-backed recommendations and personalization.

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Case Study
Summary

- Nazara experienced unprecedented growth and demand from the mobile games segment managing about 10 million hourly active users

- Mactores built game telemetry systems using Amazon MSK and Amazon Kinesis Data Analytics to ingest and process the telemetry data in real-time.

- Mactores solution enabled Nazara players with real-time leaderboards and personalized experiences with loyalty programs and incentives.

- Nazara achieved a 30% increase in ARPU (Average Revenue Per User) and 80% renewal rates of the player due to these enhancements.

About
The Customer

Nazara™

Nazara is a leading diversified gaming & sports media platform with a presence in India, Africa, and North America. The company has offerings across the interactive gaming, eSports, ad-tech, and gamified early learning ecosystems, including World Cricket Championship (WCC) and CarromClash in mobile games, Kiddopia in gamified early learning, Nodwin, PublishMe, and Sportskeeda in eSports and eSports media, OpenPlay, Halaplay and Qunami in skill-based, fantasy and trivia games, and Datawrkz in digital ad tech.

The customer realized that to stay competitive, they needed a solution to understand their player's behavior and interactions with the platform, use game telemetry to enhance the player experience, and make decisions based on streaming real-time data.

Customer
Situation

Nazara experienced unprecedented growth and demand from the mobile games segment. They manage about 10 million hourly active users with 600k subscription changes daily while managing traffic data from 75 different telecom operators across Singapore, India, Indonesia, Malaysia, Sri Lanka, Bangladesh, South Africa, and other African countries.

The analytics team's key challenge was managing real-time data, providing Nazara business users and players with an enhanced experience.

Nazara also needed observability and deep monitoring into the Apache Kafka cluster to manage platform operations. Since they didn't want to perform the undifferentiated heavy lifting of infrastructure management and security while pivoting to mobile gaming, the executive team focused on shifting talent to performing higher value-added tasks instead of day-to-day operational management.

"Nazara needed a total transformation to provide real-time in-game telemetry. Mactores quickly created our path forward, enabling our business to have real-time streaming data, completely transforming how we monetized new revenue streams."

-Vamsi Talasila, CTO @ Nazara

Our
Approach

Business
Outcomes

Technical
Outcomes

To help Nazara analysts identify patterns and trends in their gaming applications, Mactores data science experts collaborated with Nazara business teams on their datasets.

Mactores Applications Strategy team helped Nazara platform teams to add various data points to the telemetry from the games and user interactions.

Mactores Application Engineers built a microservices-based event-driven architecture to support real-time streaming of this telemetry data.

This telemetry system consumed Amazon MSK and Amazon Kinesis Data Analytics to ingest and process the telemetry data in real time.

Real-time telemetry enabled the Nazara business teams to analyze player interactions with the platform and other players with real-time in-game telemetry.

To analyze player sentiment in real-time to adjust critical elements of the game, the Mactores Data Science team built machine learning models.

The microservices platform gave Nazara players real-time leaderboards and personalized experiences with loyalty programs and incentives.

Nazara achieved a **30% increase in ARPU** (Average Revenue Per User) and **80% renewal rates** of the player due to these enhancements.

Mactores built Kafka-based event-driven microservices-based architecture with Amazon MSK, Amazon Kinesis Data Analytics, Amazon S3, Amazon ECS, Amazon App Mesh, and Amazon Sagemaker, which enhanced user **experience by 40%**.

Mactores integrated the Prometheus endpoint from Amazon MSK with Datadog. Implemented Cruise Control to manage Kafka brokers and balance the traffic in real-time, reducing **operational costs by 25%**.

Our
Approach

Business
Outcomes (Cont'd)

Technical
Outcomes (Cont'd)

By analyzing player activity, Nazara business teams can better understand player preferences and behavior, schedule more relevant content, commission enticing new game releases, and connect more closely with online players improving the overall profitability of the platform.

AI/ML models in production built by Mactores Data Science Team predict the socioeconomic class, age, and gender of anonymous or unregistered players from content viewed, giving Nazara platform advertisers confidence in their return on investments in Nazara games.

Mactores transformed customers' gaming engine into an event-driven model, containerized and deployed in Amazon ECS with Amazon AppMesh. Integration of Amazon MSK with ECS enabled event-driven gaming decisions by the gaming engine. Integration of Amazon MSK with ECS enabled event-driven gaming decisions by the gaming engine.

Reference
Architecture

Services Delivered by Mactores

- Develop and deploy Clustering and Classification models built using Amazon Sagemaker
- Clustering for Streaming Data using Gaussian mixture Model for clustering
- Mactores built Apache Kafka-based event-driven microservices-based architecture with Amazon MSK, Amazon ECS, Amazon App Mesh, and Amazon Sagemaker
- Amazon S3-backed data lake for analytics platform
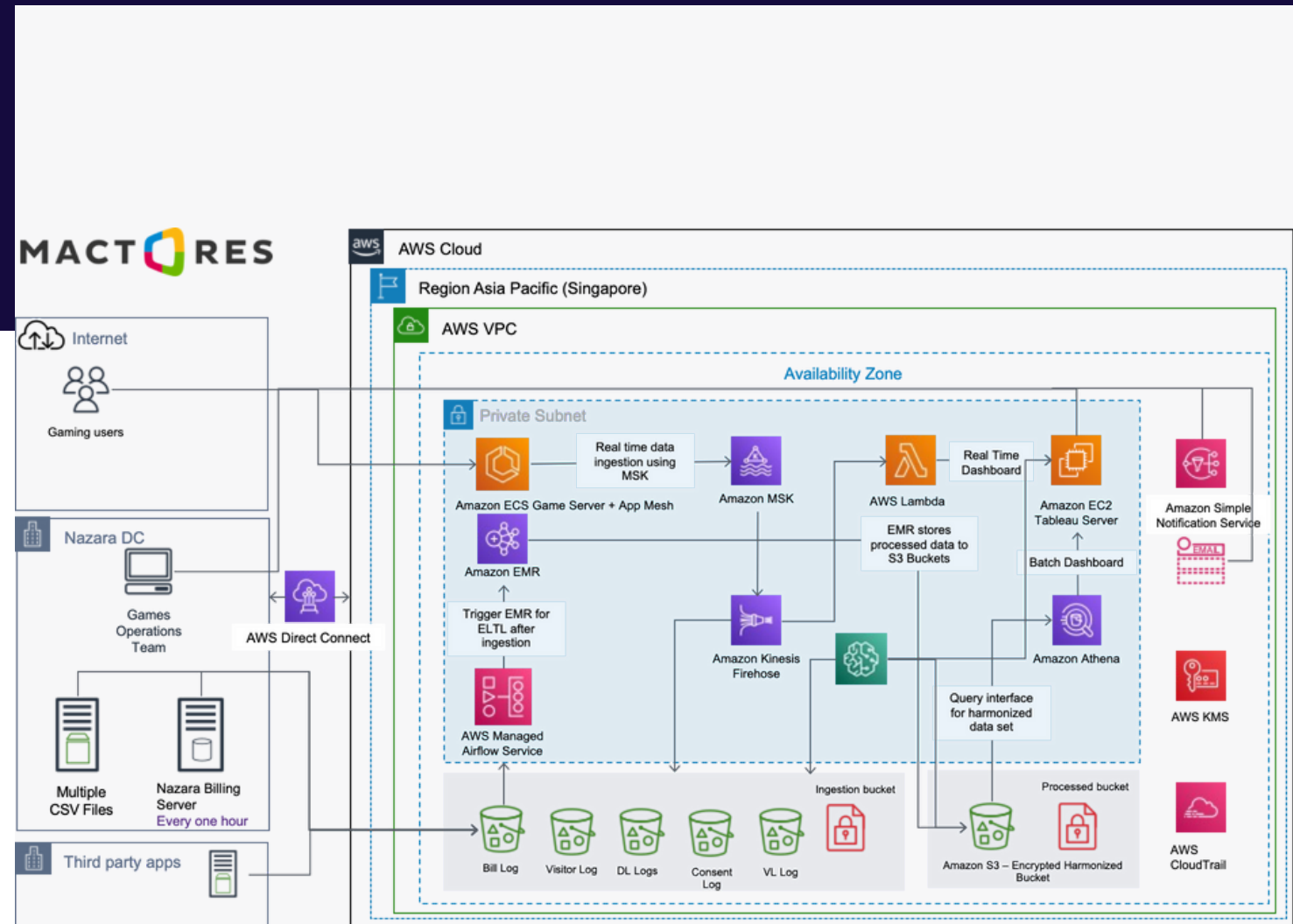
Getting
Started

Nazara had researched enough to know they needed to conduct a POC. After engaging with Mactores during an Apache Kafka webinar, we collaborated on developing the scope for a POC using Amazon MSK for real-time data, Amazon EMR to deploy the Apache Spark-based ETL Jobs, and Amazon Redshift for end-user queries.

During the POC, Mactores led the Nazara team through an Immersion Day workshop to provide context and insights into the services being deployed as part of the POC.

The POC results proved that the Amazon MSK could handle their peak traffic which resulted in using the Mactores proposed design leveraging recommended Architecture for production.

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Our
Solutions

Data Lake

Data Lake

Databases

Data Ops

MLOPS
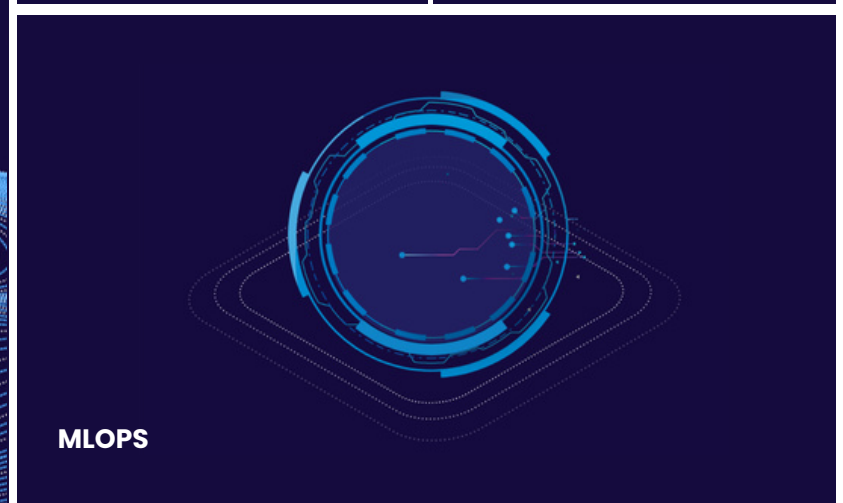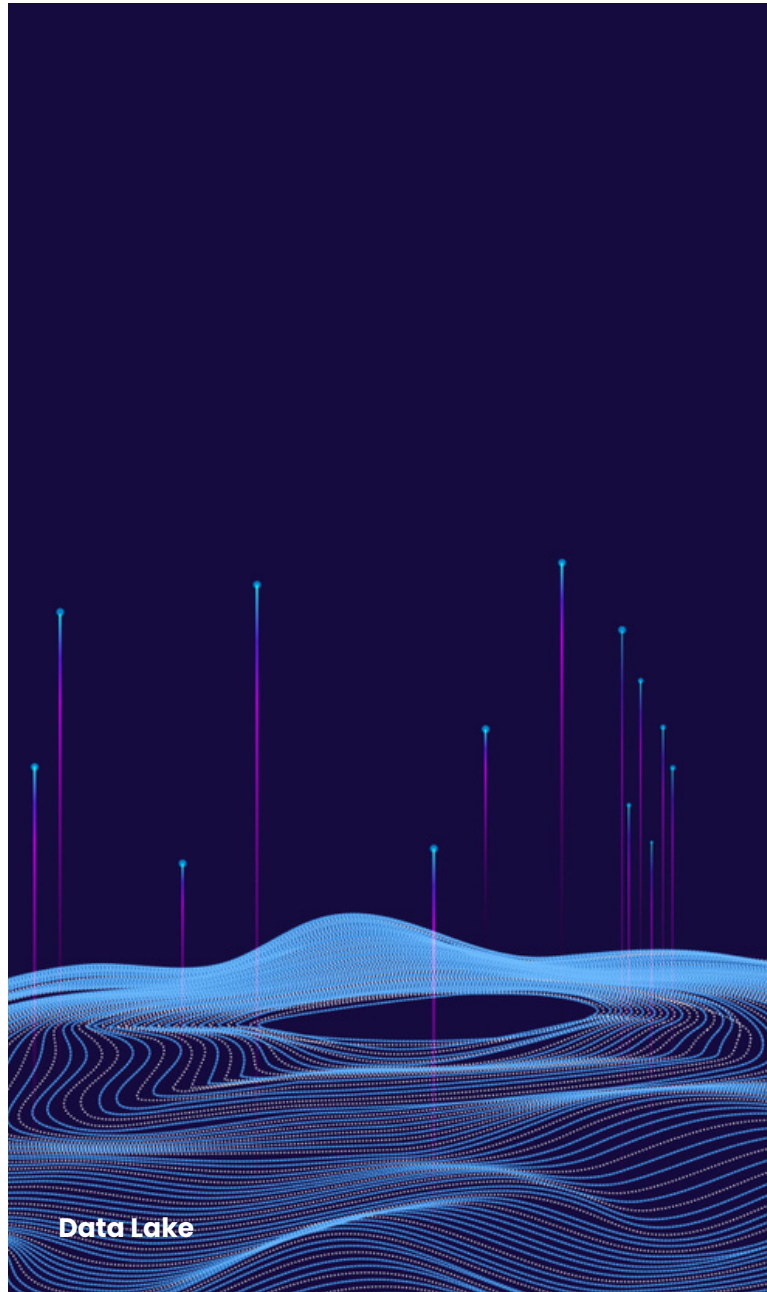
Our **Process**

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
PARTNER
Advanced Tier
Services

aws
PARTNER
ML Services
Competency

aws
PARTNER
Data & Analytics
Services
Competency

aws
PARTNER
DevOps Services
Competency

aws
PARTNER
Migration Services
Competency

aws
100
CERTIFIED

aws
PARTNER
Immersion Day

AWS Validated
Service Deliveries

aws
PARTNER
Amazon Redshift
Delivery

aws
PARTNER
Amazon RDS
Delivery

aws
PARTNER
AWS Database
Migration Service
Delivery

aws
PARTNER
Amazon EMR
Delivery

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