

CASE STUDY

## Built a Hybrid Payment Platform from Scratch on AWS ECS

Location: USA



## ABOUT THE CUSTOMER

The client is the USA's first hybrid payment platform that promotes the use of both digital and cash payments. Based in New York, the organization is building a bridge between physical and digital payments to create an ecology where change can exist digitally while eradicating the inconvenience it has physically.

## CHALLENGES

The client was finding it difficult to manage leftover coins and bills. With this, customer satisfaction was declining. Hence, the client was looking for a digital payment solution that can make the best use of the leftover coins.

01



### SCALABILITY:

Moreover, the client was afraid of how to build an app with future scalability.

02



### SECURITY:

Since the app idea was related to both physical and digital payment, security was a major concern.





# AAIC'S SOLUTIONS

The client approached us with the app requirements. Our team of AWS certified architects and engineers discussed all the requirements and created a solutions architecture. We deployed a dedicated team of architects, engineers, and QAs to build the app from scratch.

This is how we have created the whole app by leveraging new and suitable technologies:

## Backend API Development

We built the backend APIs for all the back-end services from the server-side. Our team used NodeJS for writing the APIs and to serve the demands of the app, admin portal, and POS system.

## Frontend Application Framework Development

Our team developed a mobile app based on Android and iOS. We used Flutter, which enabled us to develop this cross-platform mobile app faster. Our team saves a lot of time by choosing Flutter as it allows us to build apps for Android and iOS using the same code.

## POS App

Integrated the application with POS app in native Android technology to avoid any unknown system-specific issues and support the Clover POS system.

## Payment Gateway

We integrated a payment gateway with the app to store and manage the user's bank accounts with security. This integration helped the client to avoid compliance-related issues. As the app can't store bank account details in the database.

## SMS Gateway

We also integrated an SMS gateway service with many features. With this, the users get OTP SMS. This comes with scalability. Depending on the increasing user base, the customer can accommodate more numbers by scaling the OTP service. We also integrated a cloud messaging service for push notifications.

## AWS ECS Deployment

We used Amazon Elastic Container Service (AWS ECS) to build the server of the app. The auto-scaling and CI/CD allow the client to grow as per demands and release apps faster than before. It allows the client to rent VMs as per the need of their app and traffic.





## BENEFITS OF AMAZON ECS



### High performance

You can start, pause, and manage thousands of containers in seconds.



### Resource efficiency

You can run multiple diverse containers in the same EC2 instances.



### Secure

Your app in EC2 runs with an Amazon Virtual Private Cloud (VPC) and leverages IAM roles by giving you full control and ownership.



Amazon ECS

## BENEFITS OF AAIC'S SOLUTIONS



### Customer Satisfaction

Our client is boosting customer satisfaction and revenue by digitizing change at the POS.



### Cash Security

The client can decrease the loss of cash because of theft and mishandling by digitizing cash transactions.



### Efficiency

Now the merchant can create a virtual cash register where they instantly upload the digital change to their POS Machine instead of dealing with coin and cash pick-ups and drop-offs.

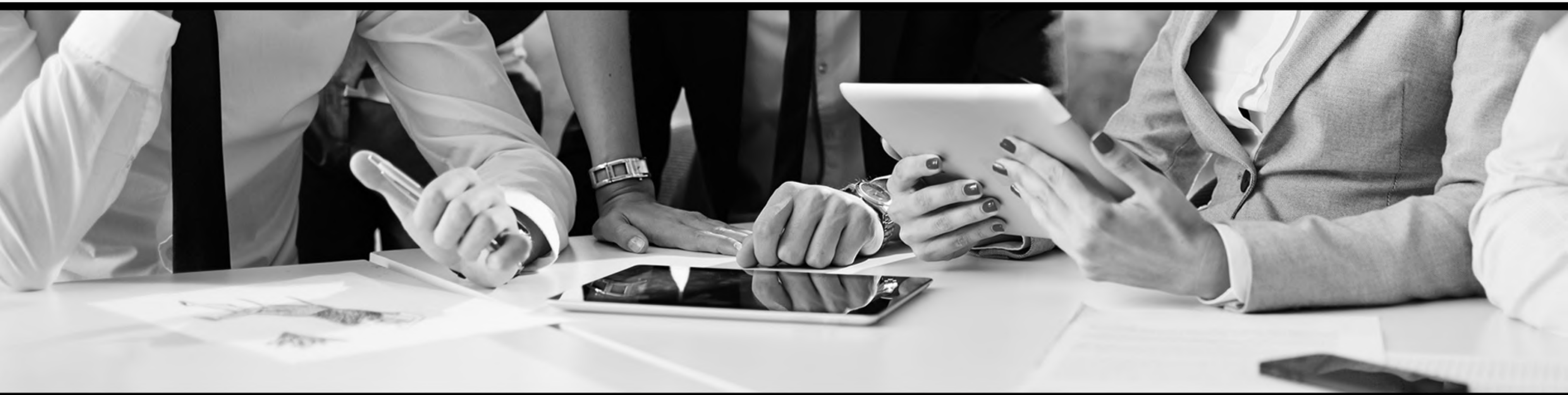




# TECHNOLOGY STACK



- Node JS
- React JS
- Flutter
- Android
- Plaid & Dwolla
- Twilio
- FCM
- AWS ECS



**BOOK A MEETING WITH  
OUR ARCHITECT**



## ABOUT AAIC

We are automation experts, with a majority(> 60%) of our workforce AWS-certified. We assist you in applying intelligence to the Cloud and DevOps, as our name suggests.

Our AWS certified experts create high-performing cloud apps by utilizing intelligent components and smart integrations to accelerate your digital transformation journey.

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