

Using AWS CloudFormation for a Serverless Solution for Lead Prospecting.

Executive Summary

IO Progression is a company concerned with education that seeks to cover the existing spaces on topics such as the training and professionalization of people in cutting-edge technological platforms. For this reason, IO Progression needs to capture people interested in their professional training as well as identify to companies that care about the training of their staff in strategic business areas.

The Challenge

IO progression needs a simple but flexible platform that allows it to capture the business information of decision-makers as well as the public in general interested in obtaining the services offered by IO Progression, this information is regularly obtained from events and conventions where IO Progression participates offering its services so the speed and availability of the platform is crucial and should be optimal. An extra functionality in addition to the capture of information is to have a module that allows you to take a raffle where prizes are awarded to people who entered their data, this flow is carried entirely for Lambdas functions.

In addition, operational costs should be considered, which should not exceed the allocated budget without impacting factors such as security and availability.

Why AWS

AWS was selected for the range of services it offers, **AWS Lambda** being the backbone where the entire platform is supported, and business rules are executed.

In Addition, **AWS CloudFormation** provisions your resources in a safe, repeatable manner, allowing you to build and rebuild your infrastructure and applications, without having to perform manual actions or write custom scripts.



About Customer



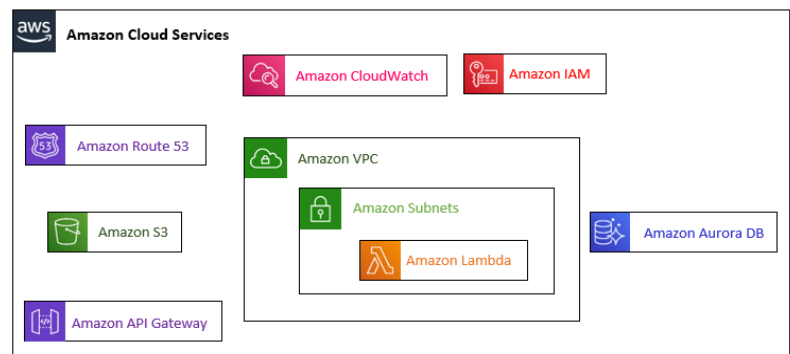
“Earn a role-based certification that shows you are keeping pace with today’s technical roles and requirements. Skill up, prove your expertise to employers and peers, and get the recognition and opportunities you’ve earned.”

The Solution

A serverless approach is followed for the construction of the system, the main points being:

“Serverless Solution”

- Cost Reduction by paying only for calls to the Lambda functions.
 - No Infrastructure Provisioning.
 - The backbone of the system are the Lambda functions.
 - Infrastructure as Code (IaC)
- The solution has about 12 Lambda functions that control the business flow.
 - Lambda functions interact with other AWS services such as RDS and API Gateway.
 - There is a reduction in costs by paying only for the resources used.
 - Security layers are used when using services such as IAM and VPCs.
 - Optimum performance by Lambdas functions when invoked to store or consult information from the BD.
 - Infrastructure as Code (IaC)

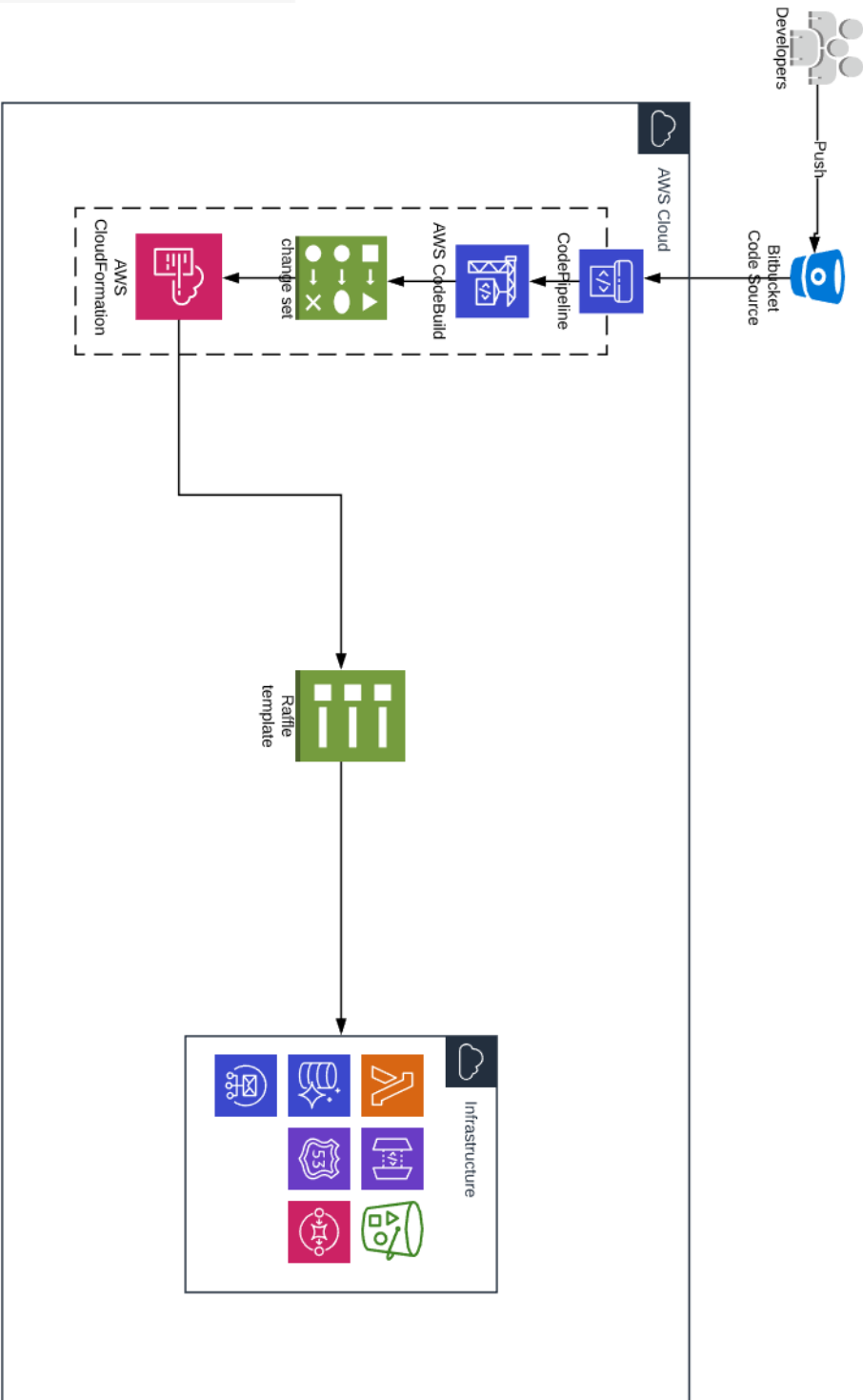


Results and Benefits

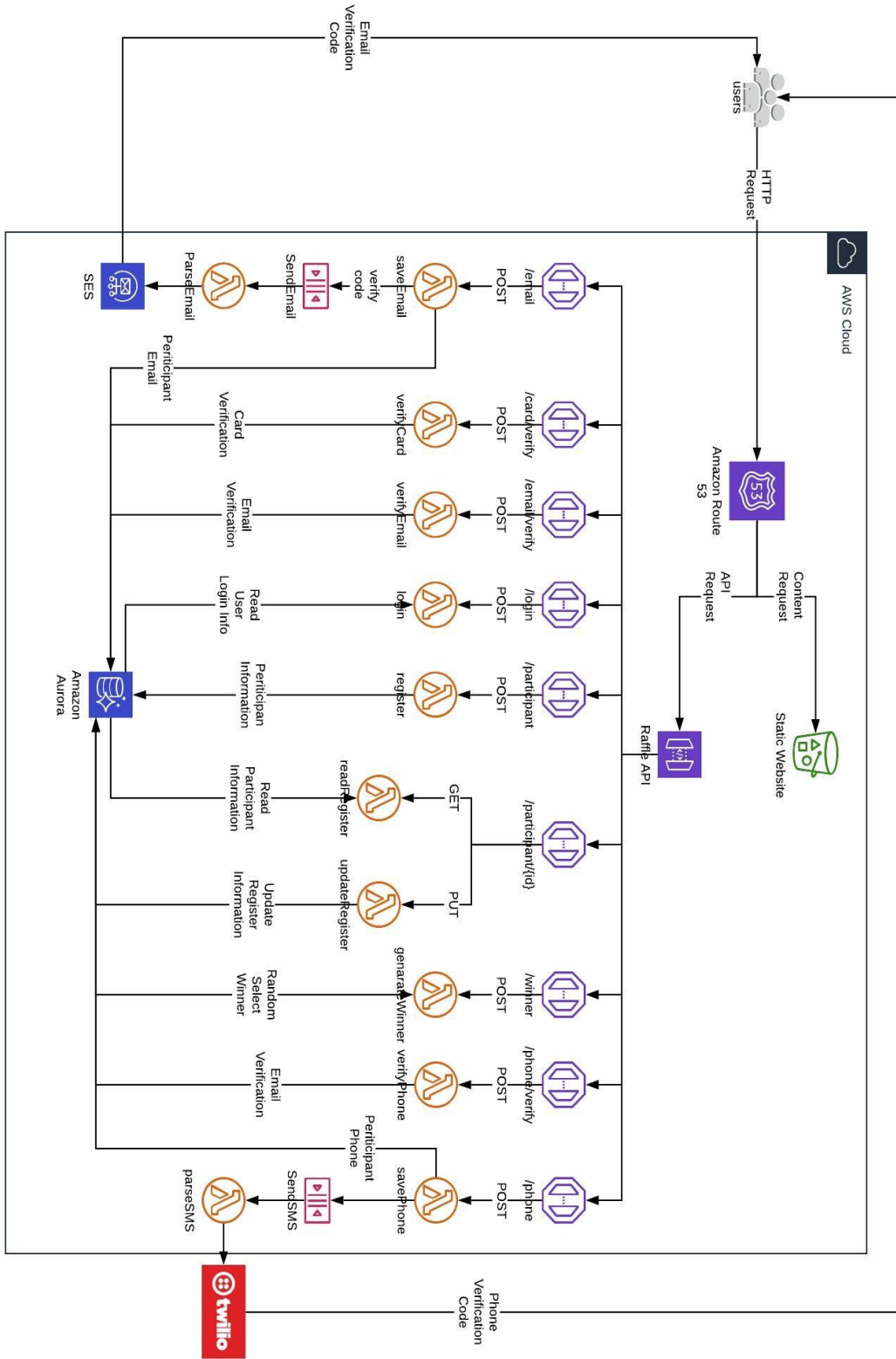
The main benefit is that there is a serverless approach where there is no need for infrastructure provisioning besides a **CI/CD pipeline** was defined with Change Sets to conduct dry run and manage updates for automate the deploying of the AWS Lambda functions and the rest of the services such as RDS Aurora and Amazon API Gateway.

Using this approach allows us to have a robust, modern and secure system in which the entire operation resides and there is also cost reduction by paying only for what is consumed.

CI/CD Pipeline



Serverless Solution Diagram



Next Steps

The application has been used in several national and international events demonstrating the power of Lambda functions in this type of applications. The operation has been so noticeable that other organizations have even approached to ask about the solution. A next step could be to try to commercialize the application as a product.

Benefits

Superior Performance

Serverless infrastructure provides a fast, hyperscale, cloud native and secure way to have the environment of the application. It also delivers access to data with millisecond latency, processes thousands of requests per second, and scale to support users anywhere in the world.

LOW TCO

Save money by replacing the physical hardware with expensive licensing fees with a serverless technology on AWS. Significantly reduce TCO with AWS serverless operational automation and free up resources to focus on your business instead of managing the infrastructure.

Fully Managed

With fully managed resource provisioning, maintenance, and backups, you no longer must worry.

About IO Connect Services

IO Connect Services is a company specializing in Information Technology Consultancy Services. All our team members have one thing in common: our enthusiasm for technology and our passion for customer service excellence. We provide services in all North America, LATAM and Europe. Our headquarters are in the NYC metropolitan area and we also have offices in Guadalajara, Mexico and Madrid, Spain.

