

# Migration from a Limit Cloud Solution to AWS SaaS by using DevOps tools for Cloud Build and Deployment

## Executive Summary

Cosoft provides infrastructure for different types of events through the Evest platform (which is a SaaS product for the management of congresses, events and / or conferences) and using services such as WHM and Cpanel for providing hosting services (Web Server, Mail Server, Hosting of the Domain of the event, etc.)

Due to the limitations of its infrastructure and architecture ,the entire platform was running on a single server (BD, Mail Service, Application), the service was limited to small events, no more than 600 people in addition to the lack of high availability and automation, the environment did not had the essential elements such as fault tolerance, robustness in the platform and security.

## The Challenge

Create a highly available, robust and secure platform that can host any type of event regardless of its size, in addition the automation of the infrastructure creation in the cloud along with automatic pipeline for deployments are essential factors for the platform so then tools like CodePipeline and Cloud Formation are required as part of the solution. The main points that the new architecture must have:

- Infrastructure as Code (IaC)
- CI/CD pipeline for deployments
- Multiple simultaneous events
- Independent horizontal scalability for each account and / or customer
  - Uniform SLAs and performance
- Automated event supply
- WHM and CPanel license savings
- Security

## Why AWS

AWS is a cloud platform which has all the necessary services to create a robust, multi-tenant, highly available, highly scalable and secure infrastructure



## About Costumer



It is a company that integrates Information Technology solutions, with more than 25 years of experience in the field, offering solutions for both the government and private markets.

They develop and market cloud platforms and mobile applications.

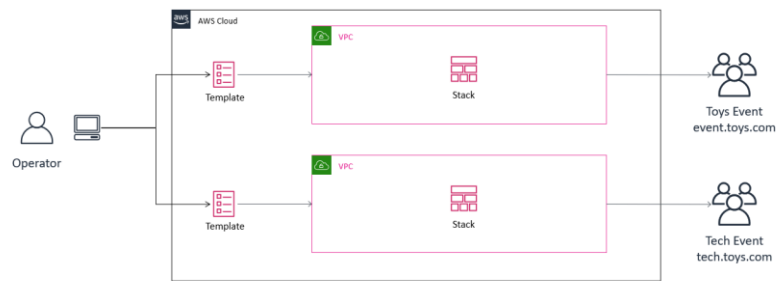
“Robust, Elastic and multi-event architecture.”

- 100% AWS based solution
- Operators provide accounts for events from an easy-to-use interface
- The necessary infrastructure for each new account is automatically generated using **CloudFormation(Infrastructure as Code)**
- Loading tests were performed, the infrastructure received around 20 thousands requests, maintaining constant performance in response and use of resources.
- The solution has best security practices

## The Solution

The new architecture whose design was thought for running entire over the cloud, includes an interface(web application) which interact with AWS services in a clear and easy way helping in the creation and configuration of the architecture that provides support a particular event, besides the platform design was created following the best practices that recommends the **AWS Well- Architected Framework** where are highlighted the following points:

- 100% AWS based solution
- 100% SaaS
- DevOps
- Automation
- Accounts Isolation
- Infrastructure as Code (IaC)



## Results and Benefits

The final product to the customer was a highly scalable and automated architecture, where through the use of **CloudFormation** the whole architecture for a single event is created in a few minutes(IaC) avoiding delays and manual mistakes that were made in the past besides some benefits were obtained like the capacity to handle multiple events at the same time without affecting the application performance providing a good experience to the end user. In addition, a pipeline CI/CD for deployments was created so then Cosoft has total control for the creation of its own infrastructure.



AWS CodePipeline

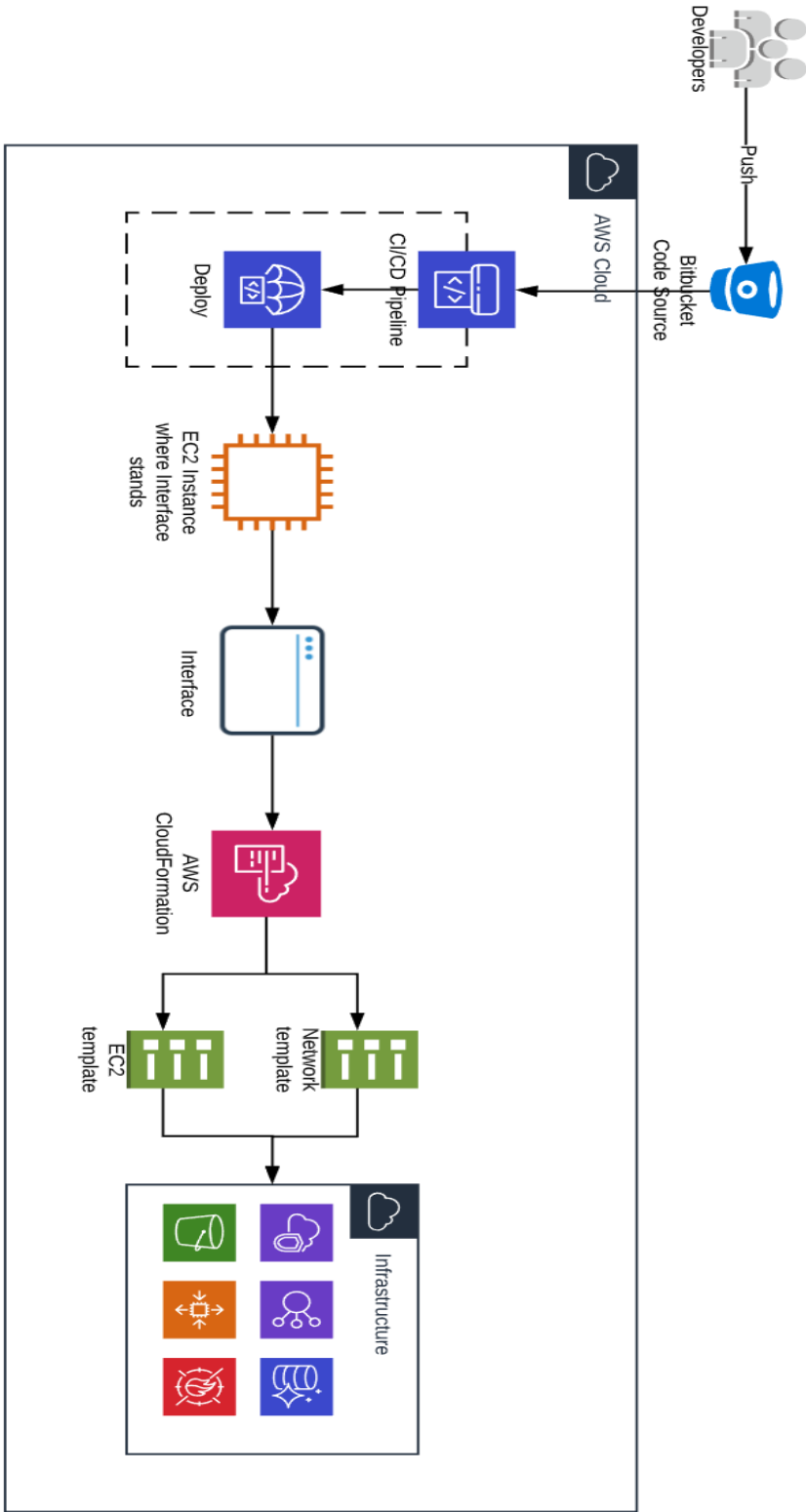


AWS CloudFormation

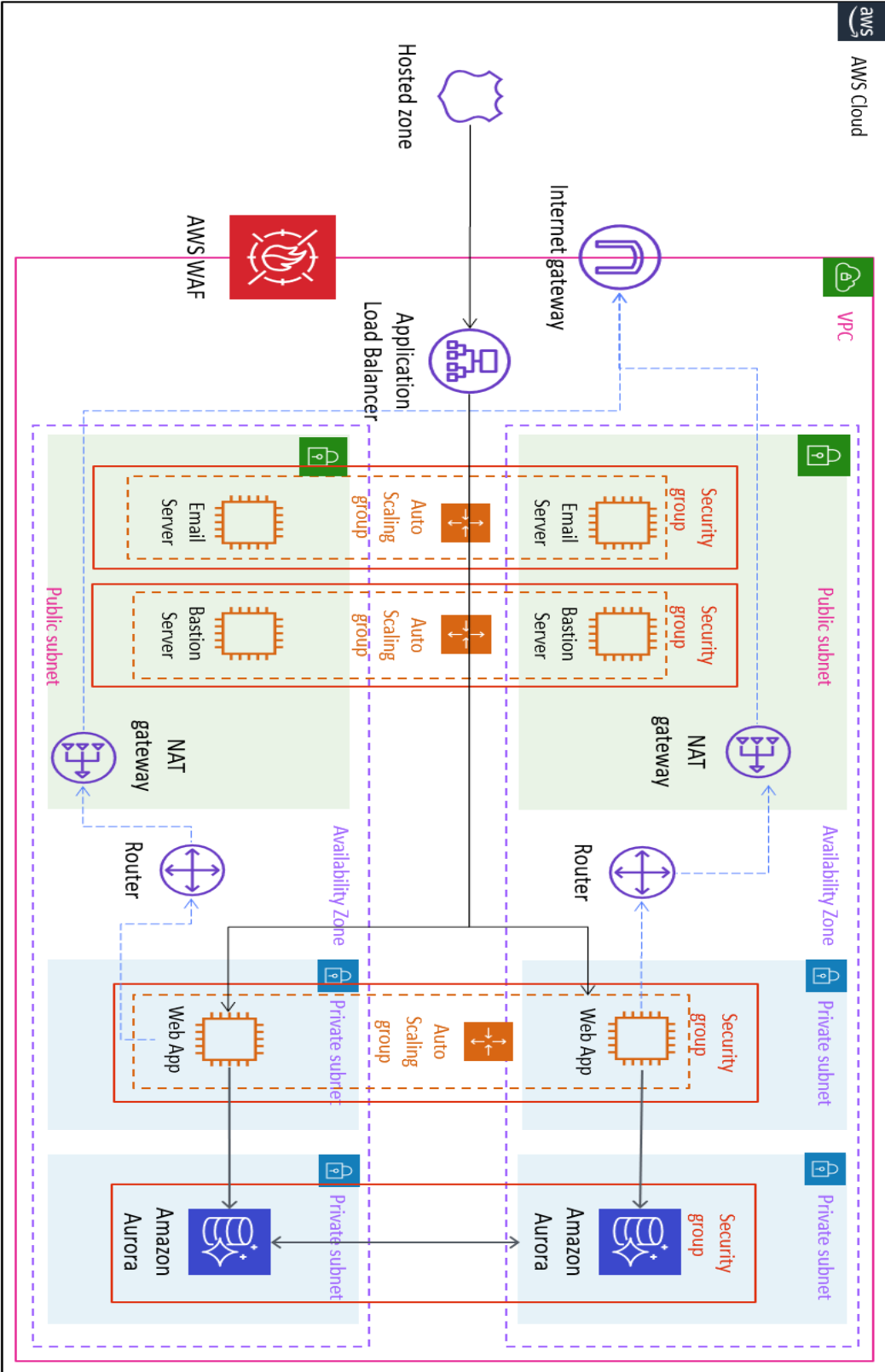


AWS CodeDeploy

# CI/CD Pipeline



# SaaS Solution Diagram



## Next Steps

Now that the application was migrated to the cloud, it's time to start taking advantage of the tools AWS and other cloud vendors offer to optimize the applications. AWS has five pillars of a well-architected framework: **security, reliability, performance efficiency, cost optimization, and operational excellence**. As part of the migration, the applications will have been properly configured, patterned after the reference implementation architectures, standards, and conventions following AWS best practices.

## Benefits

### Superior Performance

This infrastructure provides a fast, resilient and high availability environment for the application.

### LOW TCO

Save money by replacing physical hardware with expensive license fees, with AWS you pay for what you use.

### Fully Managed

With fully managed resource provisioning, maintenance and backup, 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 located in the NYC metropolitan area and we also have offices in Guadalajara and Madrid.