

# Using Edge Services in Complex Routes for E-Commerce

## Executive Summary

Ritani LLC is a company that has more than 40 years of experience in the fine jewelry industry and created an online e-commerce platform in 2018 to expand its global reach. The launch of an online catalog included new products and showcased their extensive inventory with the ability to build and design engagement rings. This enabled new global opportunities in both China and Europe while strengthening and expanding their presence with US retailers. The idea of showcasing the largest diamond database globally with the promise of offering one of the most optimal, safe and convenient online platforms to buy any type of fine jewelry led the company to redesign its platforms in all areas: infrastructure, back-end, front-end, and online marketing.

## The Challenge

The redesign of the Ritanni E-commerce platform involved several points to consider:

- Migration of the E-commerce site to a new platform.
  - Website migration had to be done in incremental stages.
- Multiple versions of the E-commerce site coexisted.
  - The old version of the site delivered content that had not been migrated.
- The new E-Commerce site required A / B Testing for validation.
  - A / B Testing should be configured so that only a percentage of users could see the new site. Users who had visited the new site should see that site for a period of 30 days.
- The Customer Service area should access the 2 sites.
  - The customer service agent should see the exact version visited by the user.

## Why AWS

AWS offers content delivery tools (CDN) such as CloudFront that has features that allow enriching web applications by distributing them globally and allows code execution in response to events generated by the CDN (Lambda@Edge).

## About Costumer

# Ritani®

Ritani LLC is an online diamond and jewelry store that concentrates a large number and variety of different high-quality certified diamonds and the best metals for multi-use jewelry.

Its main business is the e-commerce platform ([www.ritani.com](http://www.ritani.com)) with emerging stores and suppliers, providing a safe and convenient way to ship and deliver orders worldwide.

## “Simple and Elegant Solution”.

- The routing must be outside from the E-Commerce Website business logic.
- The configuration of the A / B Testing should not be affected by the routing strategy.
- To keep users on the new site for the desired period, cookies are used.

## The Solution

The solution was simple but elegant. With using the services of Route53, CloudFront and Lambda@Edge, the requests could be handled and routed to the corresponding E-Commerce site. The solution uses user cookies to keep track of the users who accessed the new sites and to validate the period.

The role of each of the services in the solution is described in more detail below:



### Amazon Route 53

- It facilitates the setting of A/B Testing through routing policies (weight).
- Setting up DNS records gives us direct access to each version of the site.



### Amazon CloudFront

- Edge Locations improve content delivery time.
- It provides a privileged place to intercept and validate Web requests.



### Lambda@Edge

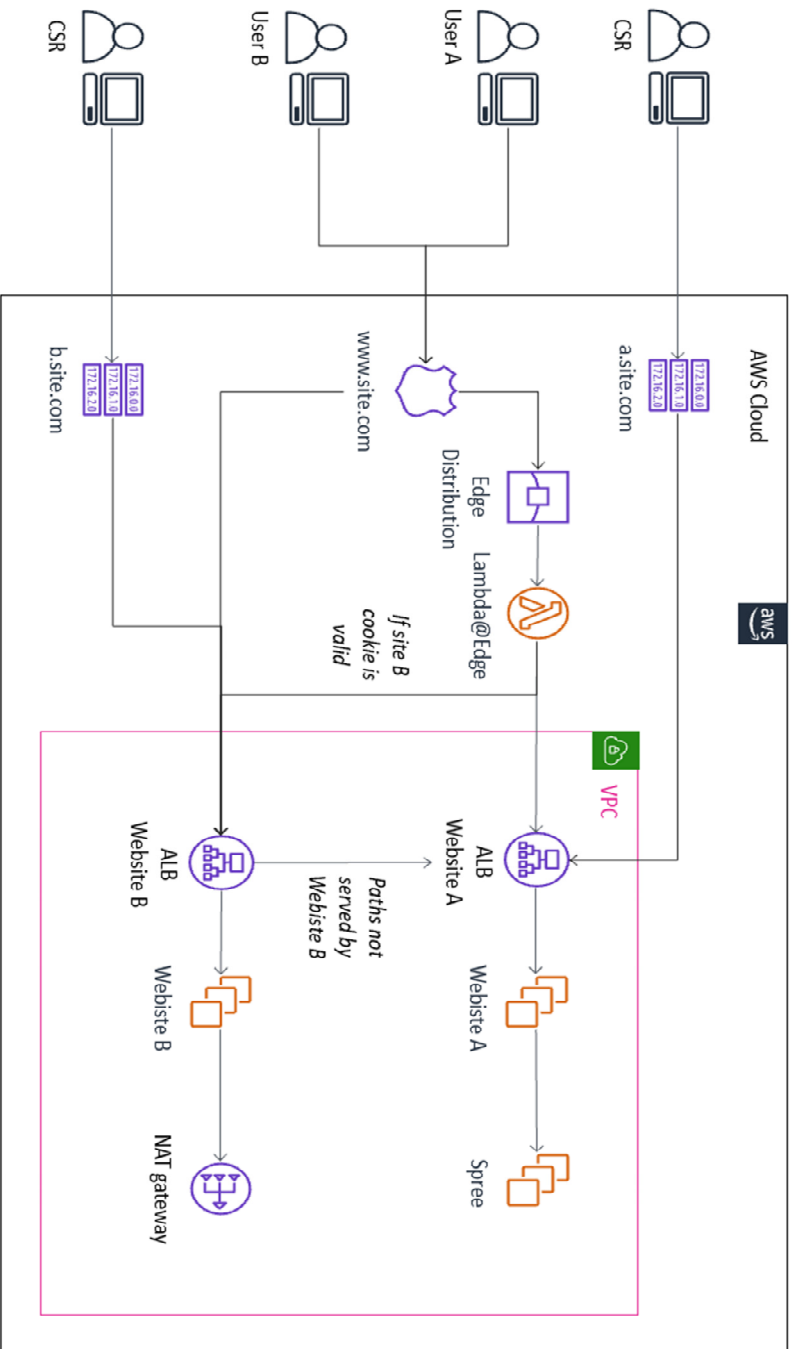
- It runs at the Edge Locations. Ideal for implementing Web routing logic.
- The context of the Web request can be read and modified in needed.

## Results and Benefits

The result met the expectations of the client where the following results stand out:

- Clients of different A / B Testing groups obtained appropriate site content.
- Customer service could access the same content from customers of different groups.
- Metrics of the A / B Testing evaluation were obtained, and adjustments of content and percentage of loads were made to the different groups.
- The complete migration to the new site was done by adjusting the total load of the A / B Testing to the new site.
- Deployment of A / B Testing with “Zero Downtime”.

## Routing Solution Diagram



## Next Steps

Ritani introduced new business ideas that required building new applications and modernizing the existing applications with new technologies. For such innovations, IO Connect Services continues supporting Ritani by leveraging AWS technologies to guarantee a robust fast delivery and positions Ritani several steps ahead of their competition.

## Benefits

### Superior Performance

The infrastructure is responsible for making the corresponding routes by balancing loads according to customer needs.

### Low TCO

The services used in the solution allow Ritani to have a robust but simple architecture that does not impact and raise the costs of the operation because of its simple maintenance.

### Fully Managed

R53, CloudFront and Lambda@Edge are services that ease the implementation of the solution because of its simplicity and range of options for configuration.

## 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.

