



## High Level Steps of Implementation

Since Garden of Life has an existing AWS footprint consisting of a VPC with redundant VPN connections back to their On-Premise locations, the main implementation steps involved setting up the following services for each Oracle E-Business Suite environment:

- ALBs to be used with each CloudFront distribution
- CloudFront distributions mapped to each load balancer
- Single WAF used for whitelisting trusted Garden of Life source IP addresses and then attached to each CloudFront distribution
- CloudFront functions for special handling of Cross-Origin Resource Sharing (CORS)
- Lambda functions for keeping the ALB security groups up to date with the latest CloudFront service IP addresses

## Challenges

There were two main challenges faced during implementation. First was around the use of CORS and second around keeping security groups up to date without manual intervention.

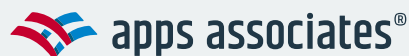
At first it was thought the core integration could be accomplished by using only an ALB and WAF. However, it was discovered rather quickly that ALBs were not sufficient alone, not supporting CORS. CloudFront however does support CORS making it central to the integration solution.

Once the integration was operational using CloudFront, the next step was to lock down access to the ALBs. To do this, we added all the AWS published CloudFront service IP addresses to the ALB security group. However, since this list of known IP addresses could change at any time, we needed a way to keep the security groups up to date in near real time without any user manual intervention. We turned to Lambda to monitor the published list of IP addresses for changes and when a change was noticed, Lambda automatically updates the security groups.

### Benefits realized after implementing CloudFront, Elastic Load Balancing and Web Application Firewall

- Tremendous cost savings over Oracle Integration Cloud
- Support for CORS
- Reliable, redundant, secure VPN connectivity
- Automated security group management via Lambda functions

## About Apps Associates



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