

F&I Express Accelerates its Migration to AWS



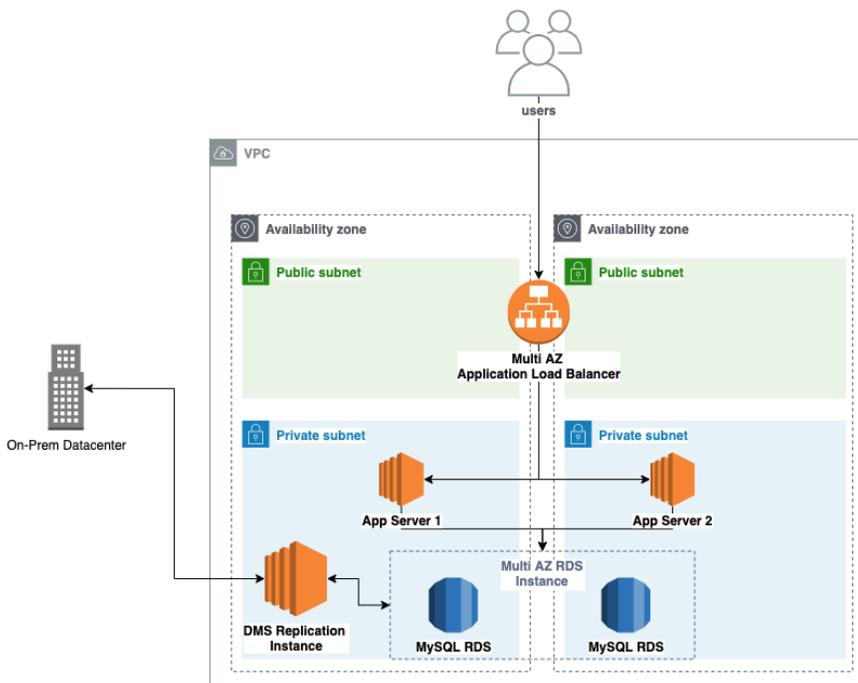
Executive Summary

F&I Express provides their customers with a hosted PHP application that helps their customers in eContracting. FIE, an eContracting application from F&I Express® is capable of processing up to 6,000 contracts per day, was hosted on RackSpace, a public cloud provider. Due to their existing configuration, F&I was experiencing availability and performance issues. Other critical issues involved attacks from the Internet due to network set-up. In their effort to move to the cloud, F&I needed an agile and efficient partner to help reduce cost, and move workloads in a secure and manageable way.

F&I Express® decided to move their infrastructure and migrate from RackSpace to Amazon Web Services (AWS), a secure cloud services platform, offering compute power, database storage, content delivery and other functionality to help their businesses scale and grow. When they needed a partner, they turned to us, BizCloud Experts, an AWS Advanced Partner. BizCloud Experts, using their knowledge and the AWS platform was able to assess the critical issues and map out a proposed solution that would broaden security, increase scalability, and provide the overall flexibility that F&I needed to handle the increased traffic at their site.

Solution Architecture

The infrastructure used for this project consists of Database Migration Service (DMS) and RDS database at the core. BizCloud Experts made use of AWS services like Application Load balancer, VPC and EC2 to provide a seamless process flow for the proposed solution.



About F&I Express



F&I Express, is leading the automotive aftermarket industry into the digital age with innovative F&I eContracting solutions. They are primarily focused on providing simplified aftermarket F&I process from pre-sale to recoveries for optimized efficiency.

In October 2018, F&I Express was acquired by Cox Automotive, Inc., and now operates as a wholly owned subsidiary.

They are headquartered in Grapevine, Texas.

Company Overview

F&I Express® is transforming the F&I after-market product sales process with digital solutions for contracting that make it easier, faster, and more profitable than ever before.

They are streamlining the automotive F&I process for dealers, agents, and providers.

Why is F&I Express working with BizCloud Experts

BizCloud Experts is an AWS Partner Network (APN) Advanced Consulting Partner with multiple AWS Service Delivery designations. BizCloud Experts was first engaged to help on a project that migrated applications from On-prem to Cloud. On the successful implementation of the project, FIE extended the relation to help create the Data Warehouse on Amazon RedShift primarily due to the need for additional cloud skills that were needed by the project and it would take a long time to build the skill set in-house.

BizCloud Experts commitment of agile delivery to accelerate complex initiatives is reflected in the following quote: *"We understand that continual data growth, and shorter IT lifecycles necessitate the need for technology migrations. When we decided to migrate, we turned to the experts at BizCloud. They understood our challenges and took the time to develop the right solution within budget and with minimal down-time, reducing our risk. We are very happy with the results and look to a more productive future in the F&I space."* Gary Peek - CIO, F&I Express.

Implementation Description

The implementation can be summarized as below.

- FIE uses a Rackspace hosted MySQL DB to store its data. To minimize downtime, we decided to use AWS Data Migration Service
- The schema had to be created before migrating the data rather than after the migration due to certain limitations which include, not carrying over certain constraints, triggers, auto increment attributes
- The load balancer was hosted in public subnet, which will be routing traffic to the different application servers on specific ports with proper traffic instead of the NGINX server that was hosted on Rackspace
- The application servers and RDS database are hosted in private subnet that are behind the ALB
- The application load balancer (ALB) enabled better handling of the requests that would timeout when compared to the handling with the load balancer provided by Rackspace
- The recovery time in case of a failure was minimal due to faster recovery from the daily RDS snapshots. As the DB instance is hosted in multiple availability zones, the access to the DB was never lost while backing up
- The availability of the application server was improved and response time for the requests have gone down with comparably sized servers as in Rackspace

Results

- Improved handling of contract requests
- 6000+ contracts were processed on a daily basis
- Improved the average response time from the Application server
- Improved Security by enforcing VPC, utilized Private/Public Subnets
- Quick, way-free AWS migration using DMS service

AWS Services

- AWS Data Migration Service
- Amazon RDS
- AWS EC2
- Application Load Balancer(ALB)
- Virtual Private Cloud (VPC)

About BizCloud Experts

BizCloud Experts is recognized as a leader in developing solutions using Serverless computing technologies, and automating IT services. We innovate, transform and seamlessly blend digital and physical platforms. To learn more, visit our site, follow us on Facebook, Linked-In, Twitter, call us @+1 (214) 206 8976 or email sales@bizcloudexperts.com.

