Fix Auto USA
AWS Migration

Executive Summary

Fix Auto USA (Fix Auto) was established to create a nation network of high-performing independent auto body shops using a franchise model to deliver a world class collision repair experience. Fix Auto is headquartered in San Diego, California where a small army of professionals seek out the latest technology and repair methodologies on behalf of their locations. This corporate center operates a comprehensive call center to schedule appointments and follow up with customers, disseminates vital information to the body shops and vehicle owner customers using a variety of media.

Fix Auto was looking to move their mission critical applications from end of life systems and hardware within the on-premises data center and vendor hosted private cloud locations, to a centrally located cloud service provider. For several years Synoptek has supported the on-premises infrastructure and system making them the logical choice to assist in guiding them through a could journey. With Synoptek having experience with the current infrastructure and cloud migrations, they were engaged to plan, coordinate and execute the multi-source migration to a central Cloud provider (AWS).

Customer Challenge

Fix Auto had been dealing with the challenges of running virtual machines on physical ESX hosts reaching their end of life in their corporate offices. They had to decide to refresh the existing hardware or migrate their systems before they experienced system failures. As their Managed Service provider, Synoptek had similar concerns and began discussions on how to address these issues.

Secondly, within corporate infrastructure they had a mission critical production application server and MSSQL database server hosted by a third-party vendor which was expensive and lacked the service and reliability they required. Finally, they had another mission critical production application server and MySQL database that was hosted outside the corporate network which was experiencing sudden restarts and application performance issues due to limits on CPU, memory and a tightly coupled architecture.

These disperse and outdated production systems required upgrades to match their business directives. Concerns regarding application availability affecting business services began to grow and drive the need to find a new solution.

Why AWS

Fix Auto had initially experimented with AWS and cloud technologies with a proof of concept where a business-critical CRM application was deployed and hosted in a default VPC. During this initial exposure, Fix Auto realized the benefits of AWS reliability, flexibility of deployments and reduced costs. However, they also realized they required additional guidance and assistance in the architecture design, implementation and migration of the production systems to a central AWS environment.

About Fix Auto USA

Company Goal:
Create a national network of high-performing independent body shops and support it with a unified infrastructure of systems and processes to ensure the best quality and service.

Our Mission:
Deliver a world class collision repair experience across the U.S., recruiting the best, most established and reputable collision repair businesses and hold them accountable to an unparalleled standard of excellence on behalf of the vehicle owners and insurers we serve.

Why the Customer Chose the Partner

With Synoptek being the managed service provider of the on-premises servers, workstations and end user support, they had a strong understanding of the current infrastructure and scope of the impacted systems. This familiarity drastically reduced discovery and assessment requirements and allowed the migration planning to be expedited.

The familiarity as the managed service provider, Synoptek employs highly knowledgeable and certified AWS solution Architects to provide required design and planning activities. Additionally, Synoptek has vast experience migrating on-premises workloads and third-party vendor environment to AWS.

Partner Solution

The project required migrating workloads from three different source locations into a new greenfield AWS VPC to host the production applications. The first phase of the project required designing the AWS VPC, network and security to be the target of the workload migration. The primary focus was on using AWS IaaS architecture where the source servers would be re-platformed (Lift and Shift) to EC2 instances to reduce changes to the applications. The FUSA Dashboard application was ideally suited to be migrated from a single physical application and MySQL data instance to a decoupled Linux web server running on EC2 with the MySQL database migrated to RDS multi-AZ MariaDB.

The other mission critical production system supported by a third-party vendor required additional planning and coordination due to the lack of access to the source environment. The original migration methodology entailed performing a VM export (OVA file) and importing into AWS using the Export / Import process. This approach was dropped due to limitations and barriers constructed by the source vendor. The final migration approach entailed deploying EC2 instances for the application and SQL servers as new builds, then installing and migrating the data and components prior to final cutover.

As for the on-premises workloads, the migration methodology was primarily new builds of Active Directory, File Share and call center application software. These migrations required additional change requests and coordination of existing systems, network and support to reduce downtime durations and risks.

Fix Auto AWS Migration Arch Diagram:
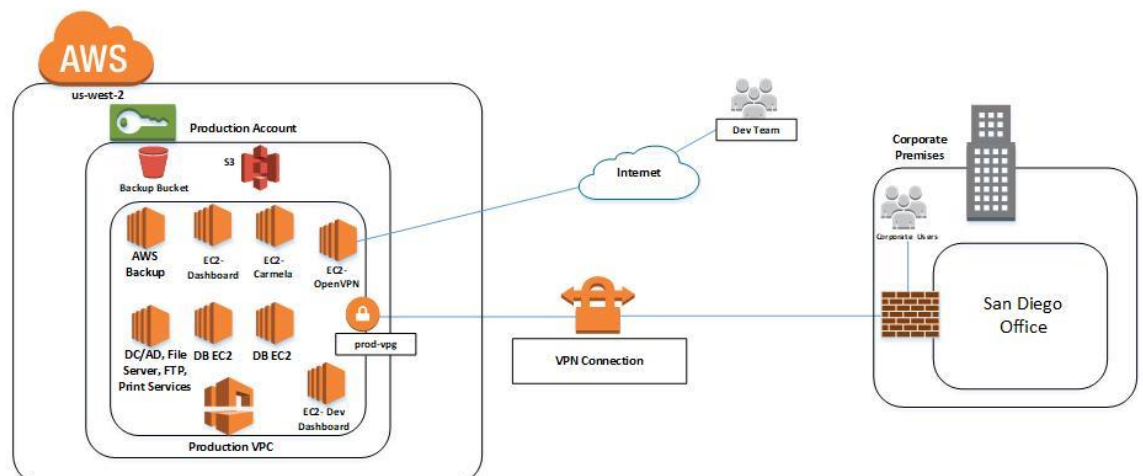
Results and Benefits

The results of the migration were successful, however, there were delays experienced with coordination and migration approach changes related to the third-party application. Additional delays were introduced based on resource availability and workload scope additions.

The primary benefit of the migration solution was an increase in reliability of the mission critical workloads into the latest generation AWS instances. An additional benefit was centered on cost reduction by eliminating the potential of a physical hardware refresh for the workloads, saving thousands of dollars on an annual basis. Another positive outcome was the reduction of costs paid to the third-party vendor for hosting and support of the application and database servers, further saving thousands of dollars over the planned costs of migration. The final primary benefit was the unifying of the disperse workloads into a single Cloud platform and environment to simplify application traffic, system access and long-term support into one managed service provider.

Next Steps

Due to the successful AWS migration and continued world class support by Synoptek, the relationship between the two parties continues to strengthen. In addition to the mission critical production workload migrations Synoptek has assisted in decoupling and migrating the POC CRM system to the production VPC and OpenVPN solutions. In the near term Synoptek plans on providing post migration Cost Optimization and periodic Well-Architected Framework reviews to ensure AWS costs remain low and the workloads operate optimally.

About the Partner

Synoptek delivers a set of IT services to clients, both proactively and as needed. For more than 20 years, mid-size and large enterprises have relied on Synoptek to manage information and customer workloads. Partnering with Synoptek provides our clients with technology resources, necessary skills, and the ability to address a range of issues related to cost, quality of service, and risk.

Synoptek is proud to be a:
- Advanced Tier Consulting Partner
- Service Delivery Program Partner
- Solution Delivery Program Partner - AWS Public Sector Partner: Government, Education, Non-Profit
- Recognized as a Partner Specialized in Managed Microsoft Workloads in AWS

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