

# Migration in the AWS Cloud fueled by FX Innovation



## Executive Summary

In September 2019, Parkland was looking at options to fully decommission one of their Data Centers located in Edmonton by the end of the year. A vast majority of Parkland's legacy hardware, software and storage had reached end-of-life and required repurchased. Not wanting to keep investing in on-premise data centers, Parkland opted to migrate these workloads to the cloud.

Parkland's executive team made this strategic decision, supported by the IT infrastructure team, that the time had come to modernize their supporting IT infrastructure for the development, test and disaster recovery environments. Leveraging Amazon Web Services, the migration of the IT infrastructure to a cloud pay-per-use based model was aligned with the leadership's vision for a modernized technology platform that would enable Parkland to focus on core business activities. The completion of the migration allowed Parkland to avoid a major capital investment over the next five years, as well as the time and resource investments in deploying and managing additional hardware to maintain their datacenter footprint.

## FX Solution

Parkland's cloud team had already implemented the AWS landing zone and account structure. Prior to the migration project, the AWS footprint was limited to a proof of concept environment supporting minor production workloads for a specific line of business. Leveraging FX Innovation expertise, the migration involved 50 dev-test servers representing 30 applications, which signified a major step forward in Parkland's cloud journey.

The team needed to meet an aggressive 9 week timeline, so a lift and shift approach was taken. This 9 week initiative encompassed the planning, design, architecture, execution and operationalization of all migrated workloads. The delivery date of the project had to be respected in order for Parkland to meet its contractual obligations and decommission the datacenter. With such a short window, the execution of the project had to be efficient and was closely managed by both parties.


During the design and architecture phase, FX Innovation realized that there were workloads that could be optimized prior to the migration. Out of the 50 servers, 20% of the targeted workloads could be decommissioned without any impacts to the customers. Additionally, another 10% of the 50 servers, which were not dev-test but production servers, and had to be migrated to the production data center in Calgary.

Network connectivity was not a challenge as Parkland an Equinix Performance Hub in place with a 1 Gbps Direct Connect link to the AWS environment.

## About Parkland Fuel



**Parkland Fuel is an independent suppliers and marketers of fuel and petroleum products and a leading convenience store operator. Parkland sells gasoline and diesel to motorists through a vast network of retail service stations becoming Canada's and the Caribbean's largest, and one of America's fastest growing fuel suppliers. Parkland owns several well-known proprietary brands, holds a license to use the Ultramar brand™ and is also a branded distributor of major fuel brands, such as Chevron and Esso.**



In order to migrate the Dev/Test environment to AWS, we opted to use CloudEndure for the replication. Using the CloudEndure agent, FX Innovation established a secure and efficient continuous data replication between the Edmonton Data Center and the staging area in AWS for the duration of the migration. Prior to executing the final cutover, FX Innovation ran tests to confirm the approach and validate the integrity of the migration approach. The tests confirmed that our approach was robust and allowed us to plan the migration in successive waves. For each wave, once data was in sync in AWS, we initiated a failover to the target VPC/subnet where the workload would now be hosted and ran user acceptance testing with the application owner to confirm a successful migration. Once we had confirmation that the new environment in AWS was functional, we coordinated with the Parkland IT team to decommission the migrated servers in the data center. This approach allowed an effective migration with minimal cutover period.

Most of the servers that we migrated were running Microsoft Windows servers (2008, 2008 R2 or 2012). As part of the migration we also configured the Security Groups to allow only private IP address connection from target CIDR range, in accordance with Parkland security teams guidance.

### **Results and Benefits**

FX Innovation delivered within the aggressive timelines and within budget; allowing Parkland to close their Edmonton data center. This resulted in avoidance of capital outlay and a more adapted financial model for their dev/test environments. By deploying AWS Instance Scheduler, Parkland is now able to reduce their costs while ensuring these environments are ready when needed.

As part of the migration, FX Innovation also assisted Parkland's cloud team to complete the operationalization of these workloads. This included providing basic monitoring using CloudWatch, backup and restore using AWS Backup, and Patch management using AWS System Manager Patch Manager.



### **About FX Innovation**

For 18 years, FX Innovation guided our clients in Canada, US and Europe in the adoption of new technologies to surpass their business objectives and to stand out from the competition. As an AWS advanced consulting partner, our delivery team meets the customer where they are in their cloud adoption journey: assessment, roadmap, migration/implementation, Managed Services (MSP) and optimization. We tailor our technological solutions to business reality and processes through our human-centric approach.