

ADAstra

Success Story: Cloud Infrastructure Modernization for CPA Canada through Microsoft Azure Migration Program

316 Databases Migrated



Secure Cloud Infrastructure



Saving on Licensing Cost



Code Optimization



Operational Run-Book



ABOUT THE CLIENT

Industry: National
Organization
Region: Canada

Background and Challenge

Our client, Chartered Professional Accountants of Canada (CPA Canada), is one of the largest national accounting bodies worldwide and represents the Canadian accounting profession both nationally and internationally. CPA Canada is dedicated to continual improvement and building a high-performing, innovative organization that creates value for members and other stakeholders.

CPA Canada had been using several traditional on-premises SQL Servers instances which were spun across four locations – Toronto, Ottawa, Burnaby, and Montreal. These databases were used to support several critical production loads, which included both vendor-based and in-house applications. Most of their databases were running on SQL Server 2012+. CPA Canada was looking to modernize their data estate and migrate these databases into alternate options available in Microsoft Azure.

Adastra's Solution

The project was divided into multiple stages: Discovery Findings, Technology Assessment, Environment Readiness, and Database Migration

DISCOVERY FINDINGS

During this stage, multiple discussions were held with key stakeholders at CPA Canada to understand and dissect their requirements. This helped Adastra gather and analyze information about the current client environment, their databases, and connected applications. A discovery report explaining the scope and vision was prepared which enlisted all the key factors, issues, and recommended solutions.

TECHNOLOGY ASSESSMENT

Since the key part of the project was to migrate the on-premises SQL Server databases into the Azure environment, it was important to perform an assessment to understand the number of databases in each SQL Server instance. For this step, our team used infrastructure as code (IaC), an analytics platform that provides analysis and recommendations to simplify the cloud assessment process. The analytical platform helped generate cost management reports that were part of the migration. Apart from the IaC, the consultants at Adastra also created a database assessment report, which described key factors such as CPU and memory utilization, target Azure database, database storage, host environment, etc., which helped us estimate and plan the project effort.

ENVIRONMENT READINESS

One of CPA Canada's key requirements was to use the Microsoft Cloud Adoption Framework to deploy cloud resources. Microsoft's Cloud Adoption Framework is a set of tools, best practices, and guidelines to help organizations with their cloud migration journey.

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At this stage, a total of eight landing zones were developed in Azure: Sandbox, Hub, Development, Testing, Staging, QA, UAT, and Production, across three subscriptions. A proof-of-concept was created in the sandbox environment where development databases were migrated to test the environment. Naming convention patterns, resource tagging, Azure Policy patterns, identity patterns, encryption patterns, and network patterns (schema for virtual networks and routing) were decided and recommended at this stage. Prior to migration, Adastra designed a network architecture, explaining the data flow and network connectivity among the resources. These resources were created in Terraform and Azure Pipelines, using the Azure Repos code versioning control tool.

DATABASE MIGRATION

Based on CPA Canada's requirements and key decisions made in the Technology Assessment stage, it was decided to migrate all the on-premises databases to Azure SQL Managed Instance for appropriate SKU size. Once all the development databases were migrated to test the newly developed landing zones, all critical databases in Production and other non-development environments were migrated. The Microsoft Azure Database Migration Service allows admins to perform or enable migrations from several database sources to Azure cloud platforms. Prior to the actual migration, the Microsoft Data Migration Assistant (DMA) tool was used to perform a pre-migration assessment to identify any potential issues that may prevent or disrupt the migration process. Apart from listing any breaking issues, the tool also reports features that may be either unsupported or incompatible with the current SQL Server version. Post-migration, the application cutover process was performed to test and validate the successful connection of applications to the target Azure databases.

Impact

By migrating to Azure, CPA Canada was able to move from their legacy databases to a modern, secure, and stable cloud environment. Using the Microsoft Cloud Adoption Framework, Adastra migrated 316 databases into Azure, many of which supported business-critical production loads. The Azure Cloud provided the client with unprecedented scalability, flexibility and was able to save on the licensing costs for SQL Server.

The implementation of the Microsoft Cloud Adoption Framework for Azure helped CPA Canada better understand the end-to-end solution, as well as cloud best practices. As the project progressed, Adastra's experts documented the database assessment and migration roadmap for the client's future reference. During the migration implementation, we also ensured Terraform code optimization to support the provisioning of future Azure resources. The Data Engineering team at Adastra also created a step-by-step operational runbook document for the client database administrators as a go-to guide to replicate this process for future scalable enhancements.

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Why Adastra?

Our partner, Microsoft, introduced Adastra to CPA Canada through the Azure Migration Program, which provides customers with proactive guidance and tools to set up their cloud infrastructure, allowing them to migrate databases and applications. Due to the current state and application dependencies to run their business operations, the client decided to leverage the expertise of Adastra Corporation to discover, assess, and enhance their cloud modernization strategy.

Adastra is proud to have been recognized as the winner of Microsoft's 2021 Analytics Impact Award, Artificial Intelligence Impact Award and Data Platform Modernization Award. These distinctions are a true testament to the long-standing collaboration with Microsoft, and Adastra's ability to delivery transformative, forward-looking solutions for customers across sectors.

ABOUT ADAstra

For over two decades, Adastra Corporation has transformed businesses into digital leaders, helping global organizations innovate, achieve operational excellence, and create unforgettable customer experiences, all with the power of their data. At the forefront of Artificial Intelligence, Data, Cloud, Digital and Governance services, Adastra delivers solutions to enterprises to leverage data they can control and trust, connecting them to their customers - and their customers to the world.



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