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the intersection of Cloud & Analytics

Leading AEC Firm
Streamlines Reporting
with Power BI Premium

Introduction

In today's digital age, many organizations rely heavily on their IT infrastructure to manage various business operations. This often includes the use of on-premises servers that are maintained by in-house IT staff. While they can provide a high level of control and security, these systems are also limited in scalability and capacity. If projects handled by a company grow substantially in size and complexity, it can put a significant strain on the organization's on-premises server, leading to performance issues, downtime, or even a complete system failure. As a result, many organizations are now turning to cloud-based solutions to help manage their growing IT needs and avoid the limitations of on-prem systems.

About the Customer

The client is an engineering and construction enterprise with a rich history of over the last century. Based in the Midwest region of the United States, it has a workforce of over ten thousand employees. They place great emphasis on delivering optimal outcomes for their clients and play a significant role in designing and constructing infrastructure that fuels the growth of cities. With an unwavering commitment to safety, our client has earned a spot among the top-ranking companies in the Architecture, Engineering, and Construction (AEC) domain.

Customer Challenge

As a prominent construction company, our client handles multiple projects concurrently, each involving a significant number of daily operations. To keep track of the progress, status, and any impediments faced by the projects, project managers need to monitor these operations closely. Our client utilized several platforms, including Oracle, to store this data, which was in the form of a transactional database.

However, the data needed to be sliced, diced, and summarized to generate reports on this information. This required conversion of the transactional database to an analytical database. Our client created cubes for this purpose using SQL Server Analysis Services (SSAS), Microsoft's on-premises business intelligence tool. However, SSAS was an in-house setup and had data storage and processing limitations.

The data from the company's CRM was spread across 35 cubes, each of which was accessed by 1,000+ employees. As a result, the size of the cubes grew considerably. The data load overwhelmed the on-prem server to a point where it started causing performance issues.

Business Objective

The company aimed to generate data-driven reports for crucial decision-making, like budget forecasting, risk management, and project status reporting. However, using an in-house BI tool presented a few challenges. To address this, the client opted for Microsoft's cloud-based BI tool, Power BI Premium, which offers higher performance and increased capacity. This solution is designed to cater to larger organizations that need to analyze and share vast amounts of data across different departments and teams. The migration from SQL Server Analysis Services to Power BI Premium required a phase-wise approach that CloudMoyo devised to ensure a seamless transition for the customer.

Solution

CloudMoyo deployed the tabular models to Power BI Premium in phases. The deployment was split into four phases based on the priority of data models:

PHASE 1
- Assess current processes & existing data models
- Analyze data source
- Choose two representative models to use for modeling
- Define the migration roadmap
- Identify user community for each model
- Optimize & migrate two identified data-models
- Create optimization plan for Phases II - IV

PHASE 2
- End user migration automation routines
- Migrate high-priority models to the new environment
- Decommission on-prem data models after UAT
- Make use of the processes set in the previous stage
- Testing and sign-off

PHASE 3
- Migrate medium-priority models to the new environment
- Decommission on-prem data models after UAT
- Modernize the end users reports / spreadsheets
- Provide support to end users

PHASE 4
- Migrate low-priority models to the new environment
- Decommission the remaining on-prem data models
- Provide support to the end users
- Modernize the end users reports / spreadsheets

Value Delivered

The client had encountered difficulties with the use of their on-premises SSAS tool, including problems with model size, response time, and scalability. The transition to Power BI Premium, facilitated by CloudMoyo, addressed these issues and optimized their BI solution. Our client experienced significant improvements in performance, DevOps deployment, and data model processing:

- Reduced model size by 20%-30%
- Decreased response time of report generation
- Streamlined DevOps deployment of model
- Enhanced scalability to handle an increasing amount of data
- Reduced the time taken for model to refresh
- Provided clean, fast and process-oriented data models
- Improved cost management

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