



Facilitating Cloud Modernization Leverage Data Virtualization To Avoid Cloud Pitfalls

Companies are rapidly moving from desktop apps to cloud-based apps, and they're moving data from physical data centers to cloud-based repositories. These trends show no signs of slowing down and IDG predicts that typical IT departments will house most of its apps and platforms in the cloud.

Moving to Cloud-Based Apps

Many companies invest in large on-premises business suites, which can be tailored to meet the needs of any company, with components that are tightly integrated, so users can be assured that they are accessing consistent, authoritative data sets. However, such solutions are extremely costly, so companies are moving to newer, less-expensive SaaS alternatives. Many companies that once relied on Oracle E-Business Suite, PeopleSoft, or Siebel are now experimenting with tools such as Salesforce, Netsuite, Workday, or Taleo.

Moving to Cloud-Based Storage

Similarly, companies are moving to cloud-based repositories to avoid having to purchase new hardware, and provision it to scale up, or divest of it to scale down.

Modernization Challenges

Unfortunately, both app migrations and data migrations are fraught with challenges, and companies will need to overcome these challenges if they hope to take full advantage of cloud benefits.

App Migration Challenges:

- Because they have moved from a single monolithic app to a set of individual apps, they no longer have a holistic view of the data across the various components. They can download the data from multiple apps via APIs and then merge it, but this is time-consuming and complex, from a security and governance perspective.
- With multiple apps, it will be difficult to maintain control over the number of licenses that a company issues. If, for example, a large number of marketing stakeholders want to access Salesforce simply to read about customer trends, it might be difficult to justify licenses for all of them.

Data Migration Challenges:

- During the migration, companies must temporarily restrict access to the data. Even if this occurs during the night, such downtime will have an impact on daily operations.
- After the migration, if there are any problems, it is often difficult and time consuming to revert to the old system, extending the downtime.
- If a company needs to retain certain data on the on-premises system, for compliance or any other purpose, it will be complex to provide access to both systems, simultaneously.

Data virtualization is a technology that overcomes each of these challenges, enabling companies to seamlessly move to cloud-based apps, and migrate data to cloud-based repositories, to gain all of the benefits that cloud solutions can provide.

How Data Virtualization Works

Most data integration technologies first copy the data and then move the copy to a new, consolidated repository. Data virtualization, in contrast, provides real-time views of the integrated data, without replication.

Because data virtualization provides data in real time, from a variety of systems that are normally very time consuming to integrate, such as transactional processing systems, cloud-based storage systems, and SaaS applications, it can support a wide variety of uses:

Integrating SaaS applications, in real time. By establishing a data virtualization layer above a company's myriad SaaS applications, companies can simulate the performance of a monolithic on-premises business suite. The data virtualization layer can resolve inconsistencies and establish rules of authenticity. A data virtualization layer can even loop through a company's Master Data Management (MDM) system, for this purpose.

Reducing SaaS licensing fees. Since users would access the data virtualization layer, which would in turn access the appropriate SaaS applications, companies can dramatically reduce the number of needed licenses. Companies can also use the virtualization layer to automate read-only feeds that cut across multiple apps.

Enabling zero-downtime migrations to the cloud. Because the data virtualization layer abstracts data consumers from the complexities of accessing the various data sources, users do not have to know where the data is stored, and migrations can occur even without users' knowledge. Companies can move the data according to their own schedules, without impacting day-to-day operations.

Enabling hybrid infrastructures. Because the data virtualization layer abstracts data consumers from access complexities, legacy and modern systems can exist simultaneously, in a hybrid configuration, to meet compliance requirements or simply to accommodate a company's preference.



Case Study: TransAlta Leverages the Denodo Platform in the Microsoft Azure Cloud to Modernize Its Data Infrastructure

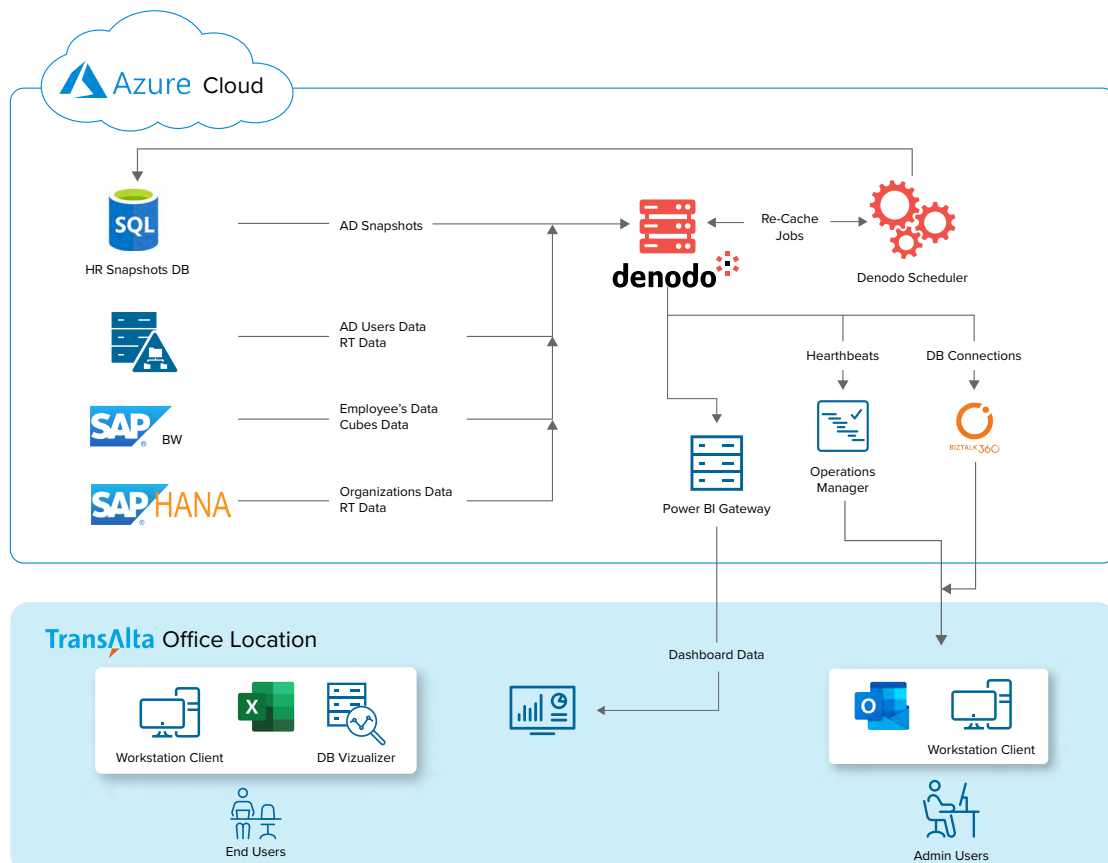
TransAlta Corporation is an electricity power generator and wholesale marketing company headquartered in Calgary, Alberta, Canada. It is a privately owned corporation, and its shares are traded publicly.

Since the company sells energy on the open market, it needs to demonstrate that it does not engage in insider trading. To do this, it is critical that certain data be accessed by authorized groups only and that all such usage is tracked and logged. One of the core technical challenges that TransAlta wanted to solve, to comply with various regulatory requirements and consolidate its data architecture, was to migrate its on-premises data infrastructure to the Azure cloud.

Solution

SimplicityBI has been TransAlta's trusted implementation partner for quite some time. In TransAlta's first implementation project, SimplicityBI had helped TransAlta to migrate its energy trading platform from Zynet to Allegro. SimplicityBI used the Denodo Platform to perform this migration, introducing data virtualization to TransAlta as a modern data integration technique that could future proof its data architecture. SimplicityBI once again came into the picture when TransAlta wanted to migrate its data infrastructure to Azure. As before, SimplicityBI used the Denodo Platform to go about this on-premises-to-cloud migration project.

The Denodo Platform enabled TransAlta's cloud migration in a phased and controlled manner, without impacting business continuity. SimplicityBI implemented the Denodo Platform on TransAlta's Microsoft Azure instance, where all of its data infrastructures were targeted to move. SimplicityBI positioned the Denodo Platform to readily connect to data from TransAlta's cloud-based Active Directory instances, real-time sensor data, and other sources, to enable a series of new cloud-based applications, including a virtual data mart for energy traders, an application to predict icing events, and an HR dashboard.



Benefits

The Denodo Platform enabled TransAlta to



Create the new icing event application that leverages real-time wind-turbine data to predict hazardous icing events with a high degree of accuracy

Provide data to the new HR dashboard that enabled the top management with a powerful view into the performance and status of their teams



Achieve a single version of the truth by feeding only the most recent data into TransAlta's energy trading platform

Migrate its on-premises data assets to Azure without affecting business continuity and in significantly less time than alternative solutions



Implement a centralized data governance program, enabling TransAlta to control and demonstrate compliance with government regulations

Simplicity BI and Denodo

Beginning 2014, Denodo and SimplicityBI have been partnering to streamline digital transformation for customers. Since then, SimplicityBI has been involved in over 25 implementations of the Denodo Platform for clients across North America.



SimplicityBI, a leading data management and analytics company, implements data solutions for our customers. For over 15 years, SimplicityBI consultants have been committed to delivering secure and innovative business intelligence and analytics solutions that work, directly impacting the bottom line.

With a focus on agile delivery, our consultants take away the complexity, tailoring solutions that are simple for our clients to use, but not easy for them to deliver without our help.

Follow [@SimplicityBI](https://twitter.com/SimplicityBI) or visit simplicitybi.com



Denodo Technologies is the leader in data virtualization providing agile, high performance data integration, data abstraction, and real-time data services across the broadest range of enterprise, cloud, big data, and unstructured data sources at half the cost of traditional approaches. Denodo's customers across every major industry have gained significant business agility and ROI.

Visit www.denodo.com