denodo

A North American Energy Company Leverages the Denodo Platform in the Microsoft Azure Cloud to Modernize Its Data Infrastructure

This energy company provides safe, reliable, and affordable power to millions of users. To do this on an everyday basis, the company needs to be able to effectively manage large volumes of critical, often highly dynamic data, while also reporting on its use of this data, to satisfy regulatory requirements. Because the company sells energy on the open market, the company must demonstrate that it does not engage in insider trading. Hence, it is exceptionally critical that only people with the proper authority can access specific data and that all such usage is carefully tracked.

Business Need

The company recently decided to migrate its on-premises data infrastructure to the cloud to enable a wider variety of more powerful, cloud-enabled applications while taking advantage of its flexibility, agility, and reduced TCO. However, in doing so, the business intelligence consultant at the company knew that the company would face several predictable challenges: Not all of the company's applications could be simply ported to the cloud, as some rely on authentication procedures that may have been developed for the on-premises environment. Also, because some data centers are farther away than others, geographically, they could introduce unexpected latency into the migration process.

Besides, the company needed to move and transform terabytes of data, and the company's extract, transform, and load (ETL) processes would take a prohibitively long time to run. The energy company wanted the flexibility to change application providers during the migration, while also migrating to the cloud in a phased, controlled manner, due to the complexity of some of its applications. The company needed a way to accelerate the migration process while also gaining the flexibility to migrate at its own pace and make changes during the migration without impacting users.

The Solution

After a diligent evaluation process, the company implemented the Denodo Platform, which uses data virtualization to establish a unified data access layer above the company's on-premises and cloud sources. In this way, the Denodo Platform abstracts users from the complexities of accessing the different sources, even when they change. Rather than physically moving the data from each source to a new repository in the company's cloud, the Denodo Platform provides real-time, integrated views of the data across the various data sources, regardless of whether they are on-premises or in the cloud.

The company implemented the Denodo Platform on its Microsoft Azure instance, where all of its data infrastructures were targeted to move. The company positioned the Denodo Platform so as to readily connect to data from the company'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.
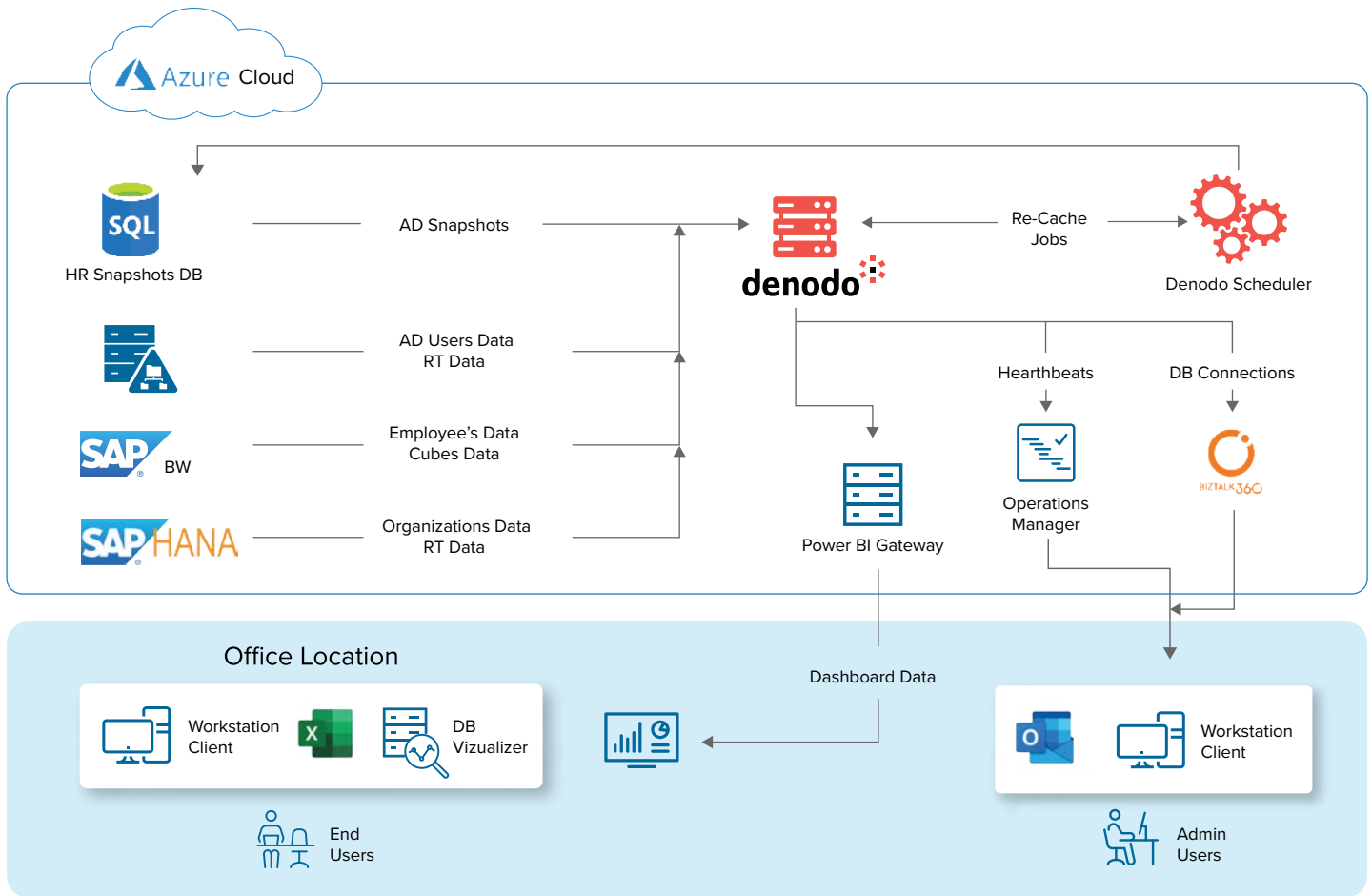
Benefits

The Denodo Platform played a central role in the company's cloud journey. It not only enabled the company to migrate to the cloud according to a phased schedule, without downtime, and without impacting users, but it also enabled the company to change data sources without having to recreate queries and structures, and without users even noticing. Because the Denodo Platform provides real-time views of the integrated data, without replicating it, the Denodo Platform significantly accelerated the migration process beyond what was possible using traditional ETL processes.

The Denodo Platform provides a single place from which to manage security and data governance protocols across all of the company's diverse data assets, greatly simplifying the company's ability to control access and demonstrate compliance with government regulations.

The company's new virtual data mart for energy trading is accessed by over 200 users a day and relies on the Denodo Platform to provide users with a single version of the truth across multiple diverse data sources. With this new resource, traders can engage in real-time analysis of the market, keeping up with its minute-by-minute changes. A new icing event application leverages real-time wind-turbine data to predict hazardous icing events with high accuracy. The company's new HR dashboard provides managers with a powerful view into their teams' performance and status.