Embracing In-memory Technology to Empower Digital Transformation

Content

Abstract

As a company expands massively, and the volume of business data grows at an exponential rate, it must operate with more valuable insights and advanced efficiency, agility across multiple business units. This indicates that its IT abilities and business processes need to grapple with a faster pace of growth – all triggering the pressing need to elevate the firm's business warehouse to be well prepared for the digital future. This case study features a utility firm's transition to SAP Business Warehouse (BW) on HANA with the help of FPT.

Taking the Right Steps to a Digital Future

Our Client, Company A is a Czech branch of a multinational utility enterprise. Annually, the Client supplies electricity, gas, and other services to millions of consumers in the Czech Republic. Currently, the Company handles several underground facilities and operates over thousands of kilometers of electrical grids.

To provide customers with reliable energy services at all time, our Client imposes strict requirements on its IT infrastructure. One of the requirements entails reporting, analyzing and interpreting large volumes of business data quickly. Previously, Company A used SAP's legacy BW software, which provides the necessary tools and functions to fulfil these tasks. **However, as the Company has grown organically, the volume of data that the legacy BW needs to handle increased significantly and needed to process at a higher rate.** The hard drive's limited speed to store data subsequently became an undesirable factor making BW reporting time-consuming. **In addition, BW's layered, scalable architecture and robust data governance impede agility.**

Like every business, our Client wants to jump on a digital bandwagon to derive competitive advantage. However, no matter how tempting the idea is, executing it is associated with significant challenges. **One is the need to ingest, process, and analyze vast amounts of data in (near) real-time.**

SAP HANA, an in-memory database platform, delivers the right answer to these challenges. By storing data in RAM and processing it in parallel, in-memory technology enables data to be analyzed in real-time, leading to faster reporting and decision-making. FPT, who had recently been chosen to manage the Company's SAP systems, provided the necessary consultation and execution for the project.

The Solution

The first step of the transition to SAP BW on HANA involves cleansing the system and archiving low-value data. To do so, we chose to deploy the nearline storage solution (NLS). The solution entails storing data from the SAP BW into nearline storage based on their operational relevance and age. Active business data would stay in the online database. On the other hand, cold and old data would be archived. Especially, nearline data can be accessed for reporting and analysis, hence allowing faster migration to SAP BW on HANA.

The next step entails converting old BW objects and related processes into the new SAP HANA to optimize space and performance utilization, as well as accelerate and simplify the data loading and preparation. It should be noted that converting from SAP BW to SAP BW on HANA might impact customer-specific ABAP development. Understanding the risk, we made relevant modifications of ABAP codes.

Custom Code Migration is, therefore, required. Besides, relevant modification of ABAP codes is necessary to prepare for the NLS implementation as NLS contains some features that affect some parts of the codes.

The Results

The migration project of SAP BW to the SAP HANA platform carried out by FPT ended with fruitful results thanks to our extensive expertise and domain experience. Our team succeeded in delivering appropriate modifications eliminating all the gaps between legacy database platform and HANA architecture.

The firm was able to enjoy the benefits of BW on HANA. In-memory database capabilities allow faster data processing. For example, the firm can now generate reports in only a few hours, otherwise taking days on a traditional hard disk drive database. With BW in-memory-optimized objects, the Client can perform complicated analysis and plan scenarios with high volume data, complex queries, etc. Plus, BW on HANA does not require the Client to commit to a complete system transformation, reducing redevelopment costs and mitigating risks.

From a management perspective, the transition to BW on SAP HANA undoubtedly relieves the Client's financial burden by optimizing the amount of data storage needed in the AWS Cloud.
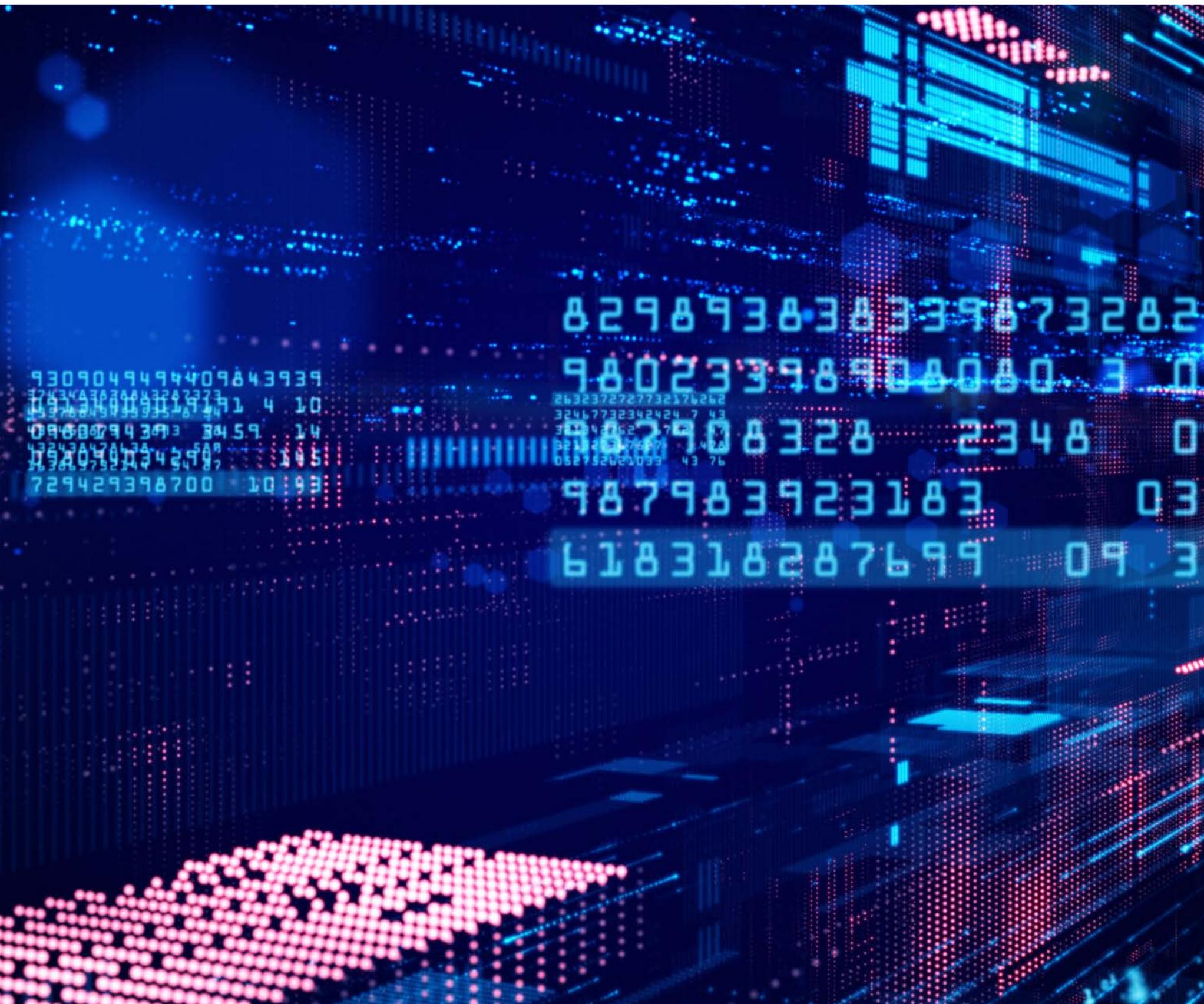
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