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Real-time data integration for connecting sap systems to azure for advanced analytics

Naresh Kumar Rapolu

Nareshkumar.rapolu@gmail.com

Abstract

The research paper has evaluated the importance of integrating real-time data analysis in different SAP systems. This integration is done with the help of the services provided by Azure. The study has identified the different benefits and drawbacks that real-time data integration can have on SAP systems. The final portion of the research paper has provided a few mitigation strategies that can be adopted by different businesses to resolve the issues that can arise as a result of real-time data integration.

Keywords: SAP systems, Azure, Real-time data integration

1. Introduction

The modern business world is becoming more advanced every day with rapid globalisation and advancements in technology. It is also due to the increasing demands from the consumers. Therefore, businesses are required to analyse the behaviours of their customers in order to gain relevant insights by which they can modify their operations. The research paper will describe how different SAP systems are connected to Azure. It will further analyse the various advantages and disadvantages of real-time data integration in SAP systems via Azure. Finally, a few recommendations will be provided that can help overcome the drawbacks of real-time data integration via Azure in the SAP systems.

2. Connecting sap systems to azure

Various businesses require different kinds of ERP software for maintaining their different areas of operation. These areas include procurement and management of raw materials, production, sales, finance, marketing, human resource management and others. In this regard, SAP is one of the pioneers in introducing premium software that offers state-of-the-art ERP solutions[1]. Alternatively, Azure is a cloud computing platform by Microsoft that offers a wide array of services. With the development of technologies, the SAP systems are connected to the Azure platform to leverage the power of cloud computing. Therefore, the business can largely improve its internal processes and produce better organisational outcomes. It needs to be mentioned that if the SAP systems are connected to Azure, they can get the benefit of real-time data integration. It can be mentioned that the throughput is calculated by dividing the total amount of data by the total transfer time. In addition, data latency is measured by adding the source system processing time with the network transmission delay and Azure processing time.

Figure 1: Logo of SAP

3. Analysing the benefits of real-time data integration via azure within sap systems

The organisations require granular and real-time visibility about their different business operations. This can be done by appropriately connecting the SAP systems with Azure. Hence, the businesses can make quick and informed decisions on the basis of the insights that are obtained[2]. The major benefits of real-time data integration via Azure in the different SAP systems can be further elucidated.

Better decision-making

The conventional batch processing of data can take a lot of time and cause operational delays. Therefore if the SAP systems are properly connected to Azure, they can take help from the multiple Azure tools. These tools offer real-time data integration services that allow businesses to evaluate large volumes of data in bulk. In this way, the business can respond to the changing market demands more efficiently. The business risks can also be considerably reduced through real-time data integration.

Seamless data flow

There are multiple SAP and non-SAP applications that are operational within a business. Real-time data integration can help to seamlessly connect these applications. Therefore, it can ensure that the data flows through different applications flawlessly without any hindrances[3]. This advantage is provided by the multiple real-time data integration services within the Azure platform. The uninterrupted flow of data helps to automate the workflow and increase the productivity of the company.

Scalability

The real-time data integration of the SAP systems with the help of Azure is also beneficial for the overall growth of the business. The cloud-based architecture helps the business to scale their SAP workloads[4]. The allocation of the different resources can also be effectively managed through the incorporation of real-time data integration on the basis of the changing demands from the consumers.

Improved security

Most importantly, the real-time data integration facility provided by Azure assists the business to enhance their security protocols. In this way, they use encryption and other methods to protect confidential information about themselves and the customers[5]. The real-time data integration also helps to identify any kind of security loopholes and create an effective strategy to mitigate it.

4. Drawbacks of real-time data integration via azure

There are certain disadvantages that businesses can face while utilising real-time data integration in their SAP systems via the Azure platform. They can be further analysed.

Higher implementation and maintenance costs

The initial cost for setting up real-time data integration via Azure can be really costly. In addition, it can be quite difficult to get sufficient funding for maintaining such Azure services.

Technical complexity

The employees within a particular business need to possess sufficient knowledge about both Azure and SAP systems. They have to be well aware of the different SAP protocols. Due to this technical complexity, the business needs to invest a lot of money and time in training their workforce.

Latency and other performance issues

One of the essential prerequisites of real-time data integration is a stable network and good processing power. If this is not properly maintained by the business, it can experience latency and other kinds of delays in data transmission[6]. It can really hamper the overall process of decision-making.

Figure 2: Drawbacks of real-time data integration via Azure

5. Recommendations

Utilising a hybrid cloud strategy

In this strategy, the businesses are required to keep their SAP workloads on-premise while performing certain processes on cloud. This can not only save a lot of money but also ensure a stable performance.

Providing appropriate training

The different employees need to be provided with adequate training on real-time data integration within the SAP systems. They must also have a good grip on the different services provided by Azure.

Appropriate planning and design

The management authorities of different businesses need to create a proper plan. This can be instrumental in improving the overall real-time data integration process of the SAP systems[7]. A coherent plan is really important for addressing latency and performance problems.

6. Conclusion

From the discussion, it is evident that real-time data integration of the SAP systems with the help of Azure platform can help a company to considerably improve their business dynamics. However, there are certain challenges like technical complexity and increased costs. Therefore, the upper management of the business needs to formulate proper plans to mitigate these issues.

Abbreviations and acronyms

- ERP - Enterprise Resource Planning
- SAP - Systems, Applications & Products in Data Processing

Units

- Total latency (milliseconds or seconds)
- Throughput (MB/s or GB/s)
- Transfer time (seconds)
- Data volume (MB or GB)

Equations

- $T=D/t$
- $L=Ts+Tn+Tp$

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