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IMPLEMENTING COST-EFFECTIVE OPTIMISATION STRATEGIES FOR SAP WORKLOADS ON AZURE

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Abstract- The research paper has delved into the concept of SAP workloads and their importance in the modern business world. The study has shed light on the different reasons why cost-effective optimisation strategies are required by businesses to effectively manage their SAP workloads on Azure. The final proton of the research work has identified the different strategies that can help a company supervise the way in which their SAP workloads are functioning and achieve a competitive advantage in their respective business sector.

Keywords- SAP, Cloud computing, Cost-effective optimisation strategies, SAP workloads, Azure

I. INTRODUCTION

The business operations within multiple sectors are constantly evolving. With the advent of the digital age, different companies are shifting towards cloud computing. Azure is one of the widely known providers of such services. They need to properly manage their SAP workloads in order to fulfil their organisational objectives. Microsoft Azure has a range of tools within its arsenal to aid the business in different ways. This research paper will explore the concept of SAP workloads on Azure. It will further identify when a business needs to incorporate cost-effective optimisation strategies. Finally, the study will highlight the different cost-effective strategies that can be adopted by businesses to manage their workloads optimally.

II. UNDERSTANDING SAP WORKLOADS ON AZURE

SAP plays a very important role within a business since it helps different organisations to operate efficiently. These tools enable the company to gain accurate insights about their business processes by which they are able to make informed decisions. In addition, the business can manage its financial processes effectively and make logical forecasts. In this relation, the workload can be described as the amount of work that is done by a program or application for the betterment of a business. It is the collection of different SAP resources that provides value to the business.

III. IDENTIFYING WHY COST-EFFECTIVE OPTIMISATION STRATEGIES ARE NEEDED

There are a number of reasons why different cost-effective strategies are adopted by different businesses for managing their SAP workloads on Microsoft Azure. Primarily, all the workloads are extremely resource-intensive. Therefore, they require consistent and high amounts of storage, computer different networking resources[1]. If all these resources are not properly optimised, then there is a high chance that the business will overspend or that important resources can remain underutilised. In addition, the amount of SAP workloads is always fluctuating. Hence, if the business is not adopting efficient optimisation strategies, there can be severe bottlenecks in the performance of the business. The strategies are further required in order to optimise the storage units in which data are stored. If the right storage tiers are chosen and subscribed to by a business, it can really help them to

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cut down unnecessary costs[2]. Most importantly, cost-effective optimisation strategies can be beneficial for automatic data transmission within different systems. Therefore, the seamless flow of data can enable the organisation to function properly and achieve its different objectives. Finally, it can be mentioned that dynamic strategies can be absolutely instrumental in improving the quality of the network by which the SAP workloads are processed. However, the upper management authorities of a particular business need to work in close collaboration with their IT and other departments to choose a range of appropriate optimisation strategies for their SAP workloads. Microsoft Azure has a wide range of tools and techniques that can be appropriately leveraged by a business to optimise the workflow within the business. The cost of a virtual machine can be measured by properly multiplying its hourly rate with the total amount of usage in hours. In addition, the license cost reduction is calculated by subtracting the hybrid benefit licensing cost from the standard licensing costs.

Figure 1: Logo of Microsoft Azure

IV. IDENTIFYING VARIOUS COST-EFFECTIVE OPTIMISATION STRATEGIES ON SAP WORKLOADS ON AZURE

There are a number of strategies that can help to optimise business performance by managing the SAP workloads on Azure properly. These techniques can be further analysed in an elaborate manner.

Implementing autoscaling

This strategy can help an organisation to automatically allocate and deallocate the different resources according to the changing workloads. This technique is absolutely helpful in minimising operational costs and maximising the output that is gained from processing SAP workloads on Azure[3].

Selecting the right-sized virtual machines

The problem of overprovisioning and inefficient utilization of resources can be effectively solved by selecting the right type of virtual machine. The upper management of a business needs to understand the business needs while making this choice. It can help to minimise the overall cost and dynamically improve business performance. In relation to this, it can be mentioned that the organisation also has to select the right kind of storage where its SAP workloads are stored[4]. The Azure Blob Storage can be beneficial for creating backups of the active data. This can save the business if any kind of unprecedented data loss occurs.

Using ExpressRoute instead of VPN

Various businesses can use Azure ExpressRoute service to establish reliable and private cloud connections between the Microsoft Azure data centres and the on-premise infrastructure[5]. The reliability of the network can help the business to carry out its operations more efficiently and achieve its business goals.

Enabling Microsoft Cost Management and Azure Advisor

These two tools that are offered by Microsoft Azure can be absolutely critical in improving the ways in which SAP workloads are managed within an organisation. Microsoft Cost Management helps to increase accuracy, efficiency and transparency in the context of managing the business costs[6]. On the other hand, Azure Advisor is a highly intuitive recommendation service that has the capability to analyse the various ways in which SAP workloads are

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functioning[7]. This helps the service to provide a number of recommendations and best practices that can help the business achieve operational efficiency.

Figure 2: Cost-effective optimisation strategies on SAP workloads on azure

V. CONCLUSION

From the entire discussion, it can be sufficiently concluded that businesses operating in various sectors need to think of effective strategies that can help them manage their SAP workloads more effectively. They need to ensure that the strategies do not require a lot of money and constant financial backup. A business can optimise its workflow by leveraging cost-effective optimisation strategies like enabling autoscaling, choosing the right virtual machines according to the business needs, utilising ExpressRoute instead of VPN and leveraging the power of efficient services like Azure Advisor and Microsoft Cost Management.

Abbreviations and acronyms

- SAP - Systems, Applications & Products in Data Processing
- VM - Virtual Machine

Units

- Throughput - (MB/s or GB/s)
- Storage capacity - (GB or TB)
- Bandwidth (Mbps or Gbps)
- Latency (Milliseconds)

Equations

- Cost per VM = VM Hourly Rate × Usage Hours per Month
- License Cost Reduction = (Standard Licensing Cost – Hybrid Benefit Licensing Cost)

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