

Advantages and Challenges of Adopting Cloud Services in Small Businesses

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Abstract

Cloud computing is a modern-day technology resulting in business growth. From large-scale to small-scale corporations, everyone is turning their operations from traditional to on-premise cloud services. It can also be said that cloud computing has various merits to offer to businesses like cost savings, scalability, flexibility, mobility, and more. However, cloud computing is quite risky as well and based on studies, it is found that it poses risks to security, costs, and overall performance of the business. Henceforth, the report focuses on what cloud computing is made up of including its several models as well as features. Moreover, the report aims to examine the benefits along the limitations of cloud computing in detail. For the research purpose, different reliable articles have been leveraged and for better comprehension, various illustrations have been used.

Keywords: Cloud Computing, Small Businesses, Service Models, Characteristics, Deployment Models, Advantages, Challenges

Introduction

In today's ever-evolving digital world, the objective of small firms is to access data anywhere anytime without putting in overhead costs. The businesses also do not seek to pay any sort of additional maintenance costs, so they are turning to cloud computing. Forbye, they aim to learn more and more about cloud computing for business improvements. For the utmost flexibility of various business operations, it become imperative for small businesses to leverage the power of cloud computing. It can be said that from storing data to processing it and ensuring top-notch business collaboration, cloud computing services provide it all to small business firms. Today, traditional services are not really in vogue, and file storage, team collaboration, data sharing, sales management, and other operational activities are taking place on the cloud.

Access to data, resources, and teams on the cloud has become convenient. With the rise in on-demand services, even small-scale businesses other than medium-sized and large corporations are utilizing cloud computing. As a result, small businesses only have to pay for what they are using, and nothing else. So this assignment mainly delves into different cloud computing services used by small businesses. In addition to this, the assignment seeks to cover how small businesses reap the benefits of cloud computing. On the other hand, the assignment aims to discuss the challenges or drawbacks of cloud computing for small businesses. By looking at the illustrations given in the assignment, the understanding and interpretation of the topic may be enhanced. The purpose is to examine cloud computing based on deep research.

Cloud Services in Small Businesses

Data on the cloud means data stored on a remote server, and with easy access to such data, businesses have realized that their operations have strengthened for sure. However, before diving into the merits and demerits of cloud computing for small businesses, it is critical to go through the components of it. For the

efficient working of cloud computing and to ensure that it serves its users with the best performance, the amalgamation of the various components is pivotal.

Foremost, the major characteristics of cloud computing include on-demand self-service, resource pooling, measured service, broad network access, as well as rapid elasticity.

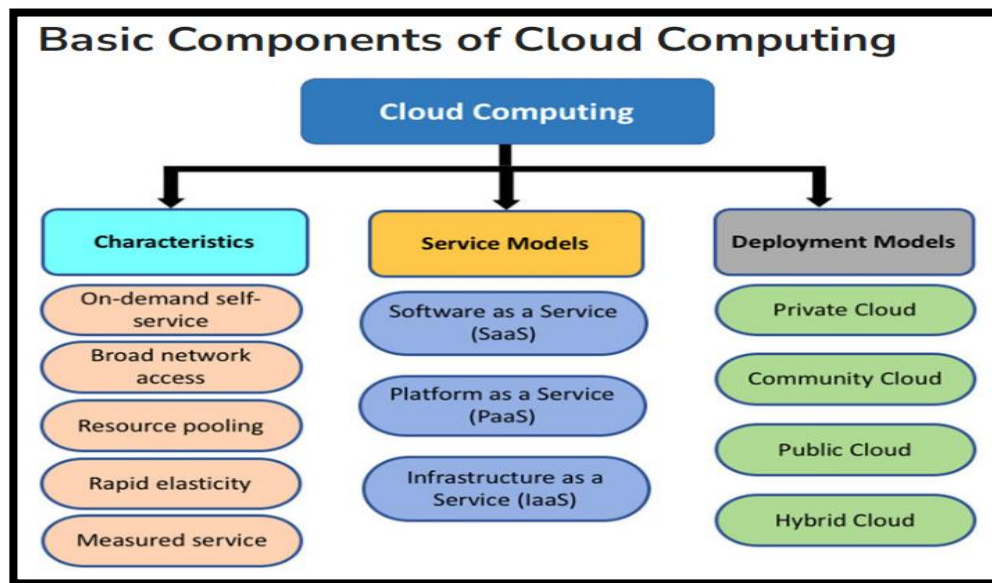


Figure 1. Basic Components of Cloud Computing

(Source: www.nwkings.com [7])

In addition to this, the key service models of cloud computing encompass SaaS, PaaS, and IaaS. Software as a Service (SaaS) aids users in utilizing the cloud application effectively, and notably, small businesses do not have to worry about installing it on a computer [1]. In contrast, the Platform as a Service (PaaS) supports small businesses by ensuring successful application development as well as deployment. Eventually, Infrastructure as a Service (IaaS) facilitates cloud users like small businesses to make effective use of robust virtual resources. These resources may be virtual storage platforms or machines as well, thus boosting virtual business operations.

More so ever, cloud computing incorporates four major deployment models, each having its importance. The first model is a private cloud that focuses on personal deployment, and the resources of the cloud are provided to just one single organization. Then, the second model is called the public cloud has a multi-tenant model, and third parties provide various IT services in this model deployment [2]. Furthermore, the hybrid cloud facilitates a unified cloud infrastructure. It is simply a blend of public & private cloud including robust on-premises cloud resources. Lastly, the community cloud emphasizes those group of firms or businesses that comes from similar background and to whom similar resources are provided.

Advantages

As per understanding and research, it can be said that cloud computing has several advantages for small businesses. Firstly, cloud computing minimizes the requirement of having in-house storage. Subsequently, it allows for on-premises data storage & management with utmost agility. As a result of cloud computing, small firms or businesses can save their IT costs and access their IT data efficiently [3]. Secondly, even small businesses have confidential & sensitive data to secure. Hence, with the use of cloud computing, they

can protect their vital data from various cyber threats. Different cloud solutions have the capability of providing data encryption services in addition to access control.



Figure 2. Benefits of Cloud Computing for Small Businesses

(Source:medium.com[8])

Additionally, the third advantage is that cloud computing is quite flexible, and thus, small businesses find it easy to utilize it well. For instance, not all small organizations may want all the IT resources at once, so cloud computing offers supple solutions. As per business needs, companies can either use a small number of resources or the opposite. The fourth advantage is that cloud computing provides mobility solutions as well to small businesses. By this, it can be implied that the work-from-home cloud solutions as well as remote business solutions are facilitated by cloud computing ensuring timely data access.

Last but not least, cloud computing is known for its analytical power as well which supports data-driven decision-making within small businesses. Startups and small corporations too have massive data in hand, and for its insightful analysis, cloud computing offers real-time analytical methods. The analytics is quite user friendly and data visualization leads to process improvement & streamlined operations. It is noteworthy that the illustration below showcases the current use of various tools associated with cloud configuration within small firms. The most used configuration tools are AWS CloudFormation as well as Azure Resource Manager templates [4]. Eventually, the result is that the cloud services underline quick performance and better outcomes.

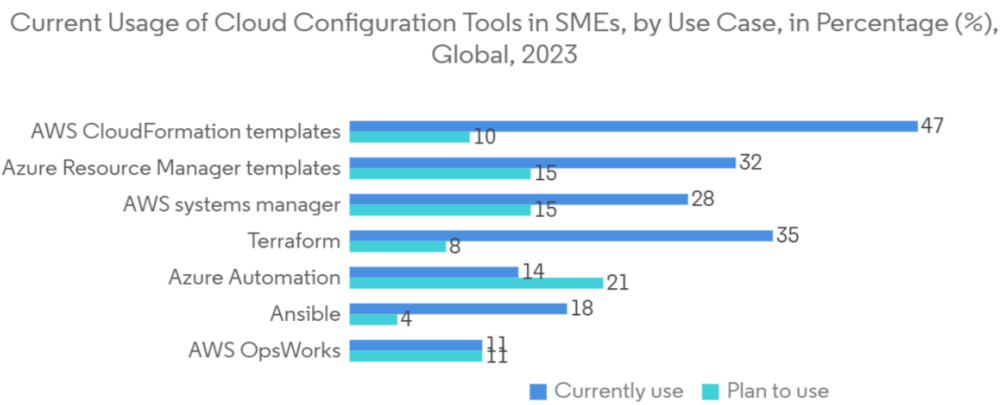


Figure 3. Current Use of Cloud Configuration Tools

(Source: [9])

Challenges

Despite many benefits, it is critical to highlight that cloud computing poses several risks to small businesses. It is worth noting that small businesses have evolving business needs, unlike medium-sized and large-scale firms. So to deal with changing requirements, cloud computing does not provide much customization. If the workflow shifts in small businesses, then various issues may be posed on cloud infrastructure. Moreover, as various third parties are involved in cloud computing, it somehow poses a challenge to security as well as the privacy of business data [5]. In addition, if a small business is set up in a remote location where there are utmost network issues, then the business cannot reap the advantages of cloud services at all.

So it can be said that to make use of cloud computing, small businesses must have a stable connection to the internet. Eventually, when small businesses are unable to leverage cloud services, their operational productivity diminishes and their financial spendings increase [6]. Forbye, a lot of small businesses today aim to use a hybrid cloud rather than utilizing any single cloud service. Hence, when small businesses implement a hybrid cloud, it becomes challenging for the company's IT department to deal with multiple variations in hybrid cloud services. Most importantly, if the cloud services are substandard, then they lead small businesses toward downfall. Data storage, security, and analysis become poor and so small businesses find it difficult to operate in a competitive business landscape.

Ultimately, not every small business has a high-performing bandwidth, so as a result, the low-performance bandwidth feeble business operations. Notably, maintaining high bandwidth services is expensive, and if a startup company has to manage that, then it will not be able to put money into other operations or tasks. Further, cloud services take place on the internet in simple terms, so if downtime occurs, the operations within small firms also suffer. For example, during technical errors or during time of service maintenance, operations may be disrupted, resulting in financial damages. So, it is vital to keep into account these challenges before switching to cloud computing.

Conclusion

In conclusion of the analytical report, it can be said that small businesses seek to thrive in the business world. Rather than investing in conventional business solutions, they are now focusing on technological research. As a result, they are investing in cloud computing considering its benefits mostly. From scalable solutions to data analysis, cloud computing services are known globally among all sizes and types of businesses. Nevertheless, the cons of cloud computing cannot be understated at all. Small businesses &

firms need to make certain of their business needs, requirements, and goals. Based on that & analysis of different cloud service providers like AWS, Azure, and more, they can choose the best one. Eventually, small businesses can grow, innovate, and ensure long-term stakeholder satisfaction via cloud computing.

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