Education

E-ISSN No : 2581-6195 | Volume : 4 | Issue : 3 | May-Jun 2021

THE UTILIZATION OF CLOUD COMPUTING IN E-BUSINESS

Yunita Sartika Sari

ABSTRACT

Currently, the business world is starting to compete globally. Companies need access to fast and accurate information to satisfy customers. Lately, cloud computing has become a dominant topic in the Information Technology. Cloud computing provides various types of services, including hardware services, infrastructure, platforms, and various types ofapplications. Cloud computing has become a solution and a service, both for increasing reliability, reducing computing costs, and providing considerable opportunities for the IT industry. The purpose of this study is to facilitate e-business system managers in maintaining infrastructure and utilizing other existing technologies in cloud computing. The data collection methods used were observation and literature review. This study discusses the use of cloud computing technology which can be an alternative for business ventures in order to compete with large companies in the global era.

KEYWORDS: Cloud Computing, E-business, Infrastructure

1. INTRODUCTION

Information Technology has been adopted by various aspects of life, this is because IT can collaborate with many other fields of knowledge. Information Technology has brought fundamental changes so that Information Technology has become a major backbone for many sectors.

Some of the Information Technology services that have been enjoyed today include: email that can distribute information between users in an organization, Facebook as a product promotion medium, online storage of learning materials, and so on. Without realizing it, we have actually taken advantage of cloud computing technology. Cloud computing is a new paradigm for hosting and delivering over the internet. Cloud computing is a mechanism, whereby a set of interconnected Information Technology resources, be it infrastructure or applications, are fully owned and managed by a third party, allowing customers to use these resources on demand through networks, both private and public networks. With cloud technology, internet users start from individuals.

The general goal of cloud computing is to increase reliability and flexibility without increasing computing costs. In general, the roles of cloud computing service providers can be divided into two categories, namely: infrastructure service providers and service providers. An infrastructure service provider is the party that manages various types of cloud platforms and their resources. The use of this computing system entirely refers to the pricing model. Meanwhile, service providers are parties who lease various types of cloud platforms and their resources, both from one or several infrastructure service providers to be leased back in order to serve end users.

At present, cloud computing has provided various types of services such as hardware services, infrastructure, platforms, and applications without the need for end user knowledge of the physical location and configuration of a computing system that can deliver various types of services to its users.

In this study, the authors discussed the use of cloud computing in the business world by taking data based on case studies at PT. Sigma Pro to provide solutions in running e-business by utilizing cloud computing.

2. RELATED OR PREVIOUS RESEARCH

In Faiq Wildana's research (2017) entitled "Implementation of Cloud Computing in Several Government Agencies", aims to determine the comparison and analysis of usage by several agencies that are already using cloud computing. The analysis method used is a comparative method which compares the four research objects related to the cloud computing services provided. Comparative analysis uses an approach to the issues and challenges of cloud computing. The study produces an overview of the application of cloud computing in government agencies along with suggestions that should be done.

Another research conducted by Misalina Ginting

Faculty of Computer Science, Mercu Buana University, Indonesia.

HOW TO CITE THIS ARTICLE:
Yunita Sartika Sari (2021).The Utilization Of Cloud Computing In E-Business, International Educational Journal of Science and Engineering (IEJSE), Vol: 4, Issue: 3, 01-04

Research Paper

(2018) entitled "Utilization of Cloud Computing in E-Learning Applications" explains that cloud computing or cloud computing is a computation that utilizes computer network services, where the scale of the computation can be changed dynamically and the resources are provided in the form of services via the internet. In cloud computing, all resources (software, platform, infrastructure) are provided by service providers so that users will no longer be burdened with providing all resources.

Meanwhile, the research conducted by Matheus Supriyanto Rumetna (2017) with the title "Utilization of Cloud Computing in the Business World: Literature Study", aims to provide a study of the benefits of implementing the SalesForce App Cloud for companies to increase tight business competitiveness. This study uses a literature study method, which begins with problem identification to analysis and discussion related to the SalesForce App Cloud, where the results of this study are that the SalesForce App Cloud can make business models more flexible, find out more quickly about market and consumer needs.

3. PLATFORM THEORY

A.Cloud Computing

Cloud computing according to the National Institute of Standards and Technology (NIST) is a computing model that provides convenience, convenience, and on-demand access to access and configure computing resources (network, servers, storage, applications, and services) can be quickly released without much interaction with the service provider (Mell & Grance, 2011). According to Voas and Zhang (2019) there are six phases of computing development to cloud computing:

1. Mainframe Computing
2. PC Computing
3. Network Computing
4. Internet Computing
5. Grid Computing

According to Jackson (2018) cloud computing is a model, not a specific technology, describing an operational and economic model for the provision and use of IT infrastructure and related services.

Cloud Computing or Cloud Computing as a form of service using the internet that is used by many users and can be personalized (arranged) easily without the user needing to know the complexity of the infrastructure behind it.

B. Cloud Computing Service

According to Kepes (2013), cloud computing services are divided into:

1. SaaS (Software as a Service)
   The form of services that can be provided by Cloud Computing where users just use it. All needs have been provided by the service provider (provider).
   Example: Public email. Users use e-mail services, where all basic aspects of computing, network, OS, applications and data are managed by service providers, such as Google.

2. PaaS (Platform as a Service)
   A form of service provided by the cloud where users are provided with a container to develop and place applications and manage them. The rest is handled by service providers.
   Example: Facebook games. Facebook provides an API so that developers can put their games on Facebook. Users are solely responsible for the running of their applications and data.

3. IaaS (Infrastructure as a Service)
   The form of service provided by the cloud where we are given a place to manage our own servers. The supporting infrastructure for the running of the server is provided by service providers. The operating system is chosen by the user which is then installed and assisted by the service provider. IAAS is a resource service on the internet. Apart from being more flexible, the main advantage of IAAS is payment according to usage (Antonopoulus, 2010).
   Example: Server rental service provider. Service providers provide servers for users. Users are free to use this space.

4. RESEARCH METHOD

Data collection is carried out to obtain the information needed in order to achieve the research objectives. The data collection method is done by:

1. Study of literature
   The data collected comes from journals, books or other sources. This approach can provide knowledge related to the features and utilization of cloud computing in carrying out business activities.

2. Observation
   Is a method of collecting data by carefully and systematically observing and recording the symptoms (phenomena) being researched. (Noor, 2015). In this observation activity is carried out by collecting data through direct observation of the phenomena that occur in the research location.

5. RESULTS AND DISCUSSION

A. Adopt Cloud Computing

The following are the stages in cloud computing adoption:

1. Analysis Phase
   At this initial stage, the user must carry out a SWOT analysis, to understand the needs of the user in order to determine whether the project is feasible, namely, feasibility, law, compliance, changes in organizational governance and risk management.
2. Planning Stage
   It is the stage of selecting a cloud service platform, application and infrastructure that is suitable for company needs to determine the costs that must be incurred by the company.

3. Adoption Stage
   This stage is the preparatory stage for migration from

conventional systems to infrastructure and cloud service applications. At this stage, we begin to implement existing facilities in cloud computing. In this case, the cloud facility chosen is Software as a Service (SaaS),

B. **Comparison of Cloud Computing Utilization**

After knowing the cloud computing adoption strategy and the reasons for its use, the following is a comparison of the results of using cloud computing which can be seen in Table 1

Activities	Conventional	Cloud Computing
Marketing	Relatively expensive	Cheap
Operating costs	Relatively expensive	Cheap
Transactions to customers	Slow and compli-cated	Easy
IT Management	Complex and intri-cate	Simple
Sales	Takes longer	Faster
Income	The increase takes a relatively longer time	Rapid increase in time

Table 1. Comparison of Conventional vs Cloud Computing Utilization

C. Features Available in Software as a Service Cloud Commputing

The cloud computing service that will be used as a sample in this study is Software as a Service (SaaS) with the pay as you go model. Users can enjoy various advanced features that have been provided, for example video conferencing from smartphones / notebooks, collaboration and automatic updates. Convenience for many things from accounting, personnel management / HRD, marketing to document storage is a service provided with this model.

The features available in Software as a Service Cloud Computing are as follows:

1. Quickbooks
   Is one of the best bookkeeping (accounting) services and can help users in the business world. This service provides convenience in terms of recording transactions and financial reports, including cash flow, budgeting and preparing financial reports as well as reconciling input and output Value Added Tax (VAT).

2. FairSail Personnel Management System
   This application aims to increase the productivity of human resources and increase employee visibility. Companies definitely really need a personnel system to support their business growth. FairSail exists as an application that provides an integrated system.
3. Salesforce Pardot Marketing Automation
   The app increases efficiency for enterprises in the ease of automating lead list tracking while providing integrated functionality to drive revenue. And also makes companies more economical in creating campaigns or offers because they can be done en masse via email from data leads based on targeted segments.

4. InsightSquared Analytics
   For companies that want to grow rapidly, this application is one solution because it can analyze sales performance. This application also provides an attractive visualization and dashboard to see real-time sales results, as well as providing Business Intelligence functions.

5. GetFeedback
   Companies can use this application to get information about market needs for products and businesses. This application was made with the main objective for customer service which is useful for companies today to compete in service with other companies. GetFeedback is equipped with features for conducting online surveys that can be accessed using all gadgets and notebooks while connected to the internet.

6. MozyPro
   This service is very cost-effective because by using this service users are provided with assurance of business continuity, in the event of disasters and damage to the system. Another advantage is that it can provide scheduling facilities for data backup to cloud storage, so that the risk of data loss can be minimized and there is no need to invest in infrastructure and investment in ICT staff training.

7. Evernote
   This service makes it easy for its users because it has a feature to scan writing, scribbles on the whiteboard of meeting results can also be uploaded and also translate it into text format, so that usually messy work notes can be tidier.

8. Salesforce1 Mobile App
   This service is perfect for corporate marketing because it has online collaboration features that support product sales. Users can also assign tasks and monitor sales performance anywhere and anytime via smartphone or tablet, because this service has a SalesForce Customer Relationship Management (CRM) module which is used to plan sales work in the field.

9. Box
   This service makes users not have to think about data loss because this application provides joint collaboration and can also give each other access rights to files or folders wherever and whenever, users who have not installed a Local Area Network (LAN) are greatly helped by this service. Another added value because this service is similar to the arrangement of folders in MyComputer so that it is very user friendly.
10. Geopointe
    This service has the advantage of making it easy to divide the sales area of each salesperson based on area and work experience. Division of sales territories is a challenge when the sales team is growing rapidly.

6. CONCLUSION

With the use of cloud computing, small companies can compete with larger companies (enterprises) because it is a solution to save on infrastructure costs in developing a business.

REFERENCE

1. Ginting, Misalina. (2018). "Utilization of Cloud Computing in E-Learning Applications". Journal of Informatics Engineering, St. Thomas Unika. Volume 03 No. 01
2. Kepes, B. (2013). Understanding The Cloud Computing Stack SaaS, Paas, IaaS. Rackspace.
3. Jatikusumo, D., & Nurhaida, I. (2020, January). Data Securing of Patients in Cloud Computing Using A Combination of SHA256 and MD5. In Proceedings of the 2020 2nd Asia Pacific Information Technology Conference (pp. 16-22).
4. Devianto, Y., & Dwiasnati, S. (2020). Electronic Business Concept In Marketing Of Village Leading Products. IJISCS (International Journal of Information System and Computer Science), 4(3), 172-181.
5. Rekarti, E., & Doktoralina, C. M. (2017). Improving business performance: A proposed model for SMEs.
6. Sandiwarno, S. (2018). Developing an E-Forum to Universitas Mercu Buana Alumni's to Improve Effective Communication and Educative by Technology Multimedia Acceptance Model. Int. J. Comput. Sci. Mob. Comput, 7(8), 113-122.
7. KL Jackson and S. Goessling. (2018) Architecting Cloud computing Solutions: Build cloud strategies that align technology and economics while effectively managing risk. Birmingham: Packt Publishing Ltd.
8. Noor, Juliansyah. (2015). Research methodology. Golden. Jakarta.
9. N. Antonopoulos and L. Gillam. (2010). Cloud computing: Principles, System and Applications, 2nd ed. London
10. P. Mell and T. Grance. (2011). "The NIST Definition of Cloud computing Recommendations of the National Institute of Standards and Technology," NIST Spec. Publ. 800-145.
11. Rumetna, Matheus Supriyanto. (2017). "Utilization of Cloud Computing in the Business World: Literature Study". Journal of Information Technology and Computer Science. Vol. 5 No. 3
12. Voas, J., & Zhang, J. (2019). Cloud Computing: New Wine or Just a New Bottle? IT professionals, 15-17.
13. Wildana, Faiq. (2017). "Cloud Computing Implementation in Several Government Agencies". Journal of the Telematics and Information Society. Volume 8 No. 2
14. Warjiyono. (2014). E-Business Study Based on Cloud Computing in Facing the 2015 ASEAN Economic Community Free Market. Bianglala Informatika, vol.2, no.2
15. Fardani, A., & Surendro, K. (2011). Cloud Computing-Based Information Technology Adoption Strategy for Small and Medium Enterprises in Indonesia. Application National Seminar
16. Ashari, A., & Setiawan, H., (2011). Cloud Computing: ICT Solutions?. Journal of Information Systems, JSI., Vol.3, no.2
17. Achmad, I., & Paulus, SI (2015). Adoption of Cloud Computing in SMEs in Indonesia. National Seminar on Information and Multimedia Technology, pp. 1-6.
18. Tandy, J., & Siswono. 2013. Cloud Computing and Its Impact on Business. ComTech., Vol.4, no.2
19. Widianto, ED (2009). Cloud Computing Study For High Availability Services in Rural Telecommunication Networks. National Seminar on Information Technology, pp. 1-5.
20. Wahyudi, T. (2013). Implementation of Cloud Computing to Maximize Tourism Services. Bianglala Informatics Journal, vol.1, no.1.