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Implementation of Cloud Computing Technology for Vocational Higher Schools

Brandon Lee Judas

Department of Information and Communication Technology Education,
Universitas Negeri Manado

*Corresponding author : 17208070@unima.ac.id

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ABSTRACT

The development of technology is so very fast, it requires every individual and institution to follow it. Such as the use of cloud computing whose use is currently very broad. In the world of education, the use of cloud computing is very useful for teachers and students in terms of learning in the classroom and outside the classroom. The Gafe application stored in the cloud provides a large selection of office applications, chat and others. This system will try to be implemented in SMK 1 Sorong City which is currently still using the manual system. This system allows teachers and students to communicate with each other and interact with each other

Keywords: Cloud computing, GAfE, Education, Software as a Service (SaaS).

INTRODUCTION

SMK (Vocational Middle School) is one of the educational institutions in Indonesia which is equivalent to SMA (High School), in contrast to SMA which is a level that is indeed prepared to continue to university, but SMK prepares its students to be able to work after graduating from high school. this school.

Cloud computing is a new term in the computing world, many have misperceptions with the concept of cloud computing, which is always equated with the internet. Cloud computing is a computing model that provides the convenience of flexibility in accessing the network to jointly utilize a configured computing resource (eg networks, servers, traditional hard disk storage, network storage or shared applications).

At SMK 1 Sorong City, he majors in Multimedia, and Computer and Network Engineering, where assignments are collected in the form of photos, Word writing, sound files, and videos which are very large in size. Currently at SMK 1 Sorong City, the collection of assignments is still manual by collecting flash drives or from cellphones to the teacher concerned. This method has many problems, such as a long time in the process of transferring files to the teacher's computer so that teaching time is used quite a lot and not to mention the spread of viruses.

The purpose of this study was to facilitate students in collecting assignments so as not to waste the teacher's time in teaching students. So that students can send assignments wherever they are until the deadline given by the teacher.

METHOD

The definition of cloud computing is still varied and many people still do not understand what cloud computing is. For IT applications and users, cloud computing is ItaaS (IT as a service). Providing computing services, data storage, and applications that can be accessed via the Internet from a centralized data center. For infrastructure service providers, cloud computing is a distributed data center that is massive in nature and is connected to an IP network. These differences of view are clearly reflected in the services provided by cloud service providers such as Google, Microsoft, and Amazon.

In general, there are three types of services in cloud computing, where in the three architectures the user does not manage directly, namely:

Infrastructure as a Service (IaaS): IaaS provides services up to the Operating System level..

Platform as a Services (PaaS): PaaS provides services at the platform level, so users are no longer bothered with the installation of operating systems, web servers, database servers, and other applications.

Software as a Service (SaaS): SaaS provides direct services to users in the form of ready-made applications. The form of application services offered such as office application services, email, data storage services, etc. Examples of SaaS services are: Office 365, Gmail, Google Docs, DropBox, and Salesforce.

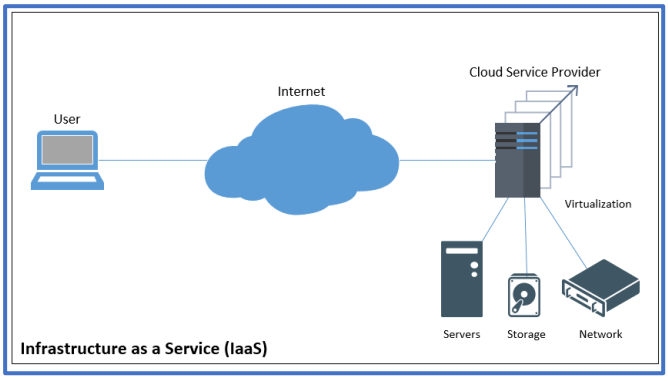

Figure 1. IaaS (Infrastructur as a Service)

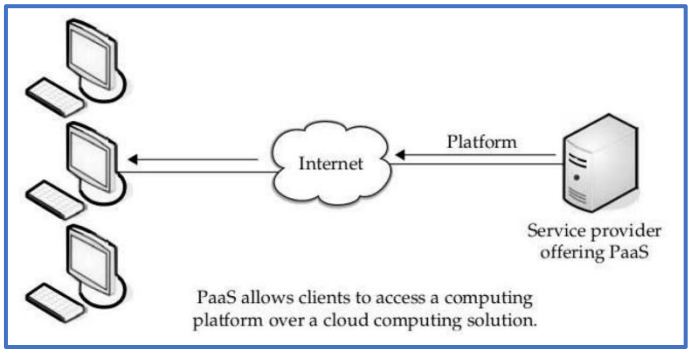

Figure 2. PaaS (Platform as a Service)

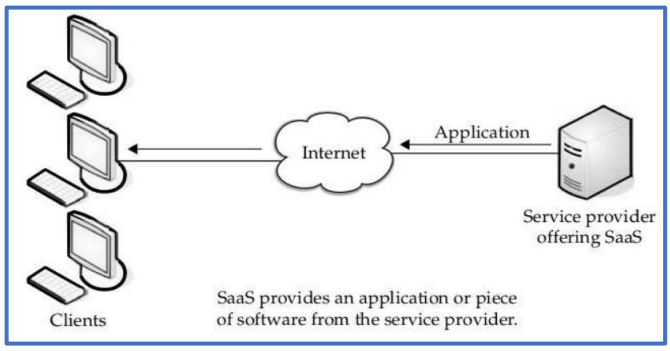

Figure 3. PaaS (Platform as a Service)

Cloud Computing provides many online services that can help schools to support wider learning and teaching process scenarios. The applications provided are generally web-based applications that are easy to access from anywhere, anytime via the Internet.

RESULTS AND DISCUSSION

To overcome the various problems of students and teachers in learning and teaching activities, a system is needed that makes it easier for students to remind them of their assignments and then makes it easier for them to collect assignments and make it easier for teachers to correct each task without having to sacrifice teaching time. In solving problems using the analysis method of the system running at the school, a system result will be obtained that makes it easier for teachers and students in learning and teaching activities.

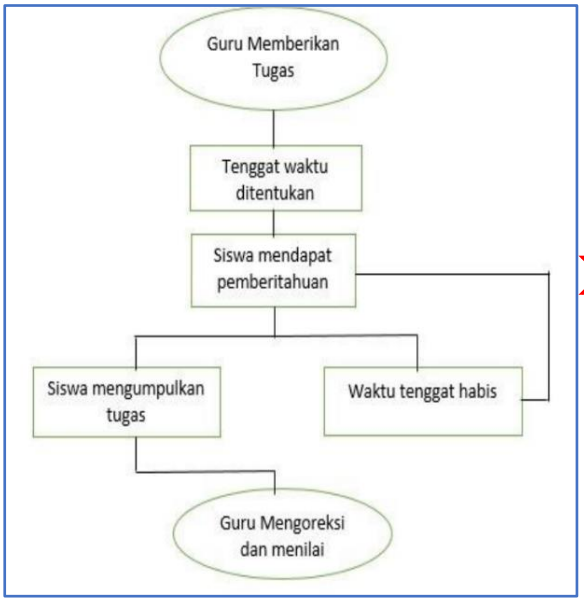

Figure 4. System Flow

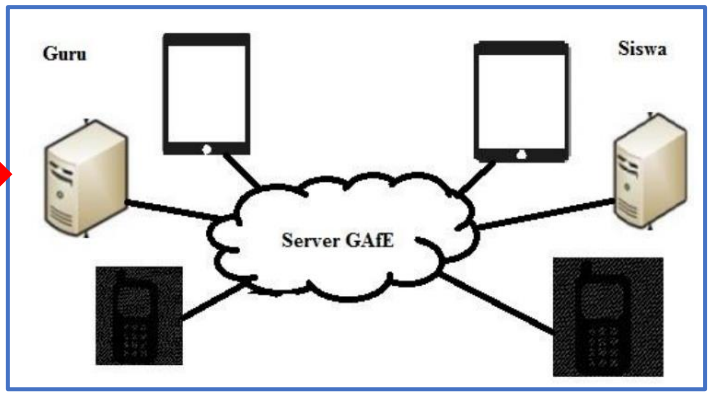

Figure 5. system works

a. Implementation

Creating a school account for SMK 1 Sorong City to make it easier for admins to manage the system. For example, creating an organization, a suborganization as a container for student and teacher accounts.

The first thing to do is organization. This is made in order to facilitate the classification of sub-organizations which later in each sub-organization there are student and teacher accounts.

Then make sub-organizations, namely the contents such as a list of teachers, class lists, in the class list as for the list of subjects which will make it easier for teachers to give assignments, assess assignments, so that teachers can also know who is doing or not.

b. Advantages

By using this system, it is very easy for teachers, students and schools. This system makes it easier for students to collect assignments, teachers are also easy to assess students. What's more, this cloud computing service is free, besides that it does not require local computer backups because everything is already on the cloud server. Each student can submit assignments wherever they are, as well as teachers can access them wherever they are. Supported by large enough storage.

c. Deficiency

Although this system makes it easier for teachers and students, there are several things that are lacking in this system, namely data confidentiality and uncertainty in recovering data. In addition, it must require an internet connection and it is difficult for those who are not used to doing their work with this system, especially those who are not used to typing on a PC or laptop.

CONCLUSION

Cloud Computing is a new computing and is the future technology that makes it easy for everyone with a variety of slick services. Currently, many institutions have started to use cloud computing systems as a means for all activities in these institutions. So many benefits are provided that the author tries to apply this system at SMK 1 Sorong City for teaching and learning activities. In its use, teachers and students can access any learning anywhere such as assignment collection, and teacher assessment. But even though it makes it easy, there are still some drawbacks, namely that you always need an internet connection to access it.

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