# CLOUD COMPUTING

Cloud computing is the delivery of computing services such as storage, applications, and other IT resources through the internet. Users only need to pay for what services they use, helping user to lower their operating costs, run their infrastructure more efficiently, and scale as your business needs change. In this article, we will talk about some examples of cloud computing service provider and comparison between all of the examples.



# Examples of Cloud Computing Service Provider

There are several cloud computing service provider are now providing their service all around the world, which are Microsoft Azure, Google Cloud, IBM Cloud, Alibaba Cloud and Oracle Cloud.

#### **Microsoft Azure**

Microsoft Azure, often referred as Azure, is a cloud computing service managed by Microsoft for application management via Microsoft-managed data centers. It was released on February 1, 2010 on Linux, Microsoft Windows, iOS and Android.

### **Google Cloud**

Google Cloud is offered by Google with a set of cloud computing services that runs on the same infrastructure that Google uses for its end-user products, such as Google Search, Gmail and Google Drive. Google Cloud was launched on April 7, 2008.

#### **IBM Cloud**

IBM Cloud is developed by IBM and offers the most open and secure public cloud for business, a next - generation hybrid multicloud platform, advanced data and AI capabilities, and deep enterprise expertise across 20 industries. It was released on April 7, 2011.

### Alibaba Cloud

Alibaba Cloud is registered and headquatered in Singapore. It was initially built to support Alibaba's own e-commerce ecosystem but now it is offered to the public. It is the largest cloud provider in China. Alibaba Cloud was founded in 2009.

#### Oracle Cloud

Oracle Cloud is provided by Oracle corporation. It was initially launched in October 2016 with a single region and provide core service across compute, storage and networking.

# Comparison of Cloud Computing Service Provider

In terms of types of provider, Microsoft Azure and Google Cloud is the most well-known cloud service provider for now. They have a very wide range of customer around the globe. As for IBM Cloud, Alibaba Cloud and Oracle Cloud, they also have a great amount of customer worldwide. Microsoft Azure has the largest amount of availability zone which is 140 countries while the others has only about 50 to 70 availability zones around the world.

In terms of cloud services that are offered, each cloud computing service provider offers different of service. Microsoft Azure, IBM Cloud and Google Cloud provides IaaS (Infrastructure), PaaS (Platform) and SaaS (Software). Alibaba Cloud provides IaaS, PaaS, DBaaS (Database) and SaaS. Oracle Cloud offers IaaS, PaaS, SaaS and DaaS (Data). User will be able to choose their own cloud computing service provider depends on what service they need for their business.

In conclusion, different cloud computing service provider has their own service and pricing. Microsoft Azure and Google Cloud is better since the services provided by both of them are great and they are the top 2 and 3 among all the cloud computing service providers. As for the other cloud computing providers, they also have their own services that Microsoft Azure and Google Cloud do not provide such as Data as a service. User can choose among all of the cloud computing service provider depends on what kind of service they want to use and then pay for what they use.

### Reflection

Cloud computing is now a trend as technology is advancing. By using cloud computing, anyone can spend less amount of money to start their business since cloud computing only charge for what the user use and user does not need to spend money on running and maintaining data centers. Different cloud computing service provider provides different service. So, user can choose what service provider they want to start their own business.

# **AMAZON WEB SERVICES**

A TALK BY DR QUSAY AL-MAATOUK

### SUMMARY OF THE TALK

Amazon Web Services (AWS) is one of the top Cloud Computing Services Providers. It is a secure cloud platform that offers a broad set of global cloud-based product. AWS provides you with ondemand access to compute, storage, network, database and other IT resources and management tools. Moreover, AWS offers flexibility and its services work together like building blocks.

AWS provides a lot of services like compute, database, storage, business application, AR & VR, game development, Internet of Things (IoT) and many more. In AWS, we can choose our server. We can create our own Operating System with Amazon Machine Image (AMI) which acts as a template that contains the software configuration (operating system, application server and applications) required to launch your instance.

Being the leader in the field of web services, AWS gives a lot of benefits to their users. Firstly, the trade capital expense for variable expense which the data center investment based on forecast and payment only for the amount consumed. Secondly, companies would put a stop in guessing the capacity of physical storage. Hence, overestimated or underestimated capacity could be avoided. Thirdly, AWS increases speed and agility by shortening the period from weeks to only minutes between wanting resources and having resources. And it also allows you to go global in minutes. And last but not least, companies could stop spending money on running and maintaining the data.

### THE ISSUES

The most significant issues had been discussed are about how companies are paying attention a lot to the time consuming and pricing costs in hardware and software solutions.

Hardware solutions require space, staff, physical security, planning and capital expenditure. Meanwhile, software solutions are flexible, can change more quickly, easily and cost-effectively than hardware solution. Hence, the usage of cloud computing or web services like Amazon Web Services is way more practical compared to physical storage or computing.

"Companies are paying a lot of attention to the time consuming and pricing costs in hardware and software solutions."

### **REFLECTION**

From our point of view, it is very important for us, to learn or educate ourselves about cloud computing. This is because, with the transformation of the Industrial Revolution 4.0 (IR 4.0), cloud computing is playing a very vital part in it. Therefore, as a generation that will be working in this environment, we need to familiarize ourselves with cloud computing. Not only in terms of knowing the definition of cloud computing, but also in terms of understanding about how cloud computing was functioning, what type of services that we can have from it, and the pro and cons of cloud computing.

Amazon Web Services (AWS) is one of the examples of cloud computing. We can take the advantages of the services that was provided by the AWS to explore more about cloud computing. Especially during our time as a student. This Is because, exploring more about cloud computing can help us to understand how the cloud computing works. Not only that, but we can also apply all this experience and knowledge in our future career later in the future.

# CURRENT TRENDS OF AUGMENTED REALITY IN INDUSTRY

A Talk by Dr. Ruzimi Mohamed

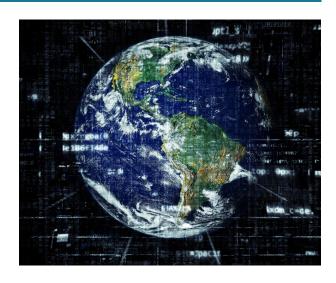
## **Summary**

In this talk, Dr. Ruzimi first introduced what is IR4.0 and 9 digital industrial technology. Then he talked about the future of AR, and showed the expected revenue of the 2025 industry, and the highest is video games. Not only that, Dr. Ruzimi introduces some use cases of AR, such as education, furniture, furniture or other large products, clothing and fashion. In these applications, the main role of AR is to let customers know if the goods meet their own requirements without need to go to the physical store. In addition, we have learned some types of AR, such as market based, projection based and superimposition based, and Dr. Ruzimi also introduces some common positions in AR, such as content developer / strategist, community / project manager and animator / sound artist .



### ssues

The first issue is a security and privacy issue that is concerned by the most people. The biggest problem is that there is currently no practical provision in the AR environment, what is allowed, what is not allowed. That means this technology can be used incorrectly.



The second issue is that AR technology may indirectly harm our body. Since AR is based on the real world operation, people may be disperse attention and cause potentially dangerous while using AR technology. The most powerful example is PokemonGo. While some players want to catch Pokemons, if they don't pay attention to their own surroundings, this may lead to traffic accidents. Some of them will also to go to some dangerous places just to catch some rare Pokemons.

# Reflection

From this talk, I realised that Augmented Reality (AR) has brought a variety of changes in many aspects of human life. AR rapidly is transforming and creating breakthroughs in the healthcare industry which is one of the most important aspect in ensuring a great life for human being. For example, these days we use AR as a medical education tool. From the video that the speaker shows to us, AR technology make it possible for human to see organs, skeletal and nervous systems by overlaying three-dimensional showing representations human anatomy on a physical body. AR have been our essential tool to communicate, engage and educate the user to improve the outcomes.