



UTM

UNIVERSITI TEKNOLOGI MALAYSIA

Group C -Technology Information System, Cloud Computing and Augmented Reality

Meeting platform - Whatsapp -Google meet

Credits - Canva

Members



NAME: SOO WEI XIANG

MATRI_NO: A21MJ5038



NAME: CHING JIE KAI

MATRI_NO: A21MJ5037



NAME: KHAIRUL FAHMI
BIN MOHD YUSOF

MATRI_NO: A21MJ5011



NAME: ADAM ISKANDAR BIN
SHARUDIN

MATRI_NO: A21MJ5041

Introduction

Cloud computing is a new concept that refers to the storage of data in the cloud. Cloud computing has replaced the hard drive technology and it is an application-based software infrastructure that stores data on remote serves, which can be accessed through the internet. It enables a company to reduce its fixed monthly expenditures for hardware, databases, servers, and software licences. It will eventually eliminate the demand for IT resources, such as employees.



Microsoft Azure

Microsoft Azure is the best-in-class hybrid cloud among other cloud vendors, with the capacity to immediately provision computer resources on-demand. Furthermore, with a suite of tools such as Azure DevOps and Visual Studio Codespaces, Microsoft leads the PaaS segment of cloud service providers. The company also provides mobile engagement with real-time analytics and tracking of user behaviours and storage services, as well as data management tools such as Azure Data Explorer, Azure AI, Azure IoT and other services.



Google Cloud Platform

Google Cloud has significantly extended its hybrid and multi-cloud workloads utilising Antos, which allows users to manage workloads across Google, AWS, and Azure in the previous years. With tools like TensorFlow, ML Kit, and Google Datasets, Google Cloud shines out in big data, machine learning, and data science capabilities. The Google Cloud platform offers 100 products that can be grouped into six categories: storage, databases, computing and hosting, networking, big data, and machine learning.



Google Cloud Platform

Alibaba Cloud

Alibaba Cloud provides a diverse variety of PaaS and IaaS services that are equivalent in terms of availability, performance, and security to other service cloud providers' offerings. Alibaba Cloud is capable of hosting huge programmes and is scalable enough to handle a high volume of users. It uses both Xen and KVM (Kernel-based virtual machine) hypervisors that are a part of Alibaba's cloud architecture for creating VM's (virtual machines) that use the Elastic Compute Service. Alibaba offers an Object Storage service, a Docker-based Cloud Container Service, and a Cloud Intelligence Brain.



Oracle Cloud

Oracle cloud offers 65 cloud services, including the industry-standards like Kubernetes, Terraform and CloudEvents. Oracle offers an Autonomous Database, which is a service that leverages machine learning to self-repair and self-optimize, and that delivers higher performance. The company also provides dedicated regions in data centers, edge computing, clustered databases, bare metal GPUs and database machines. Additionally, Oracle customers can move their existing workloads and apps to Oracle Cloud, as well as construct cloud-native solutions that combine Oracle Cloud and Microsoft Azure services.

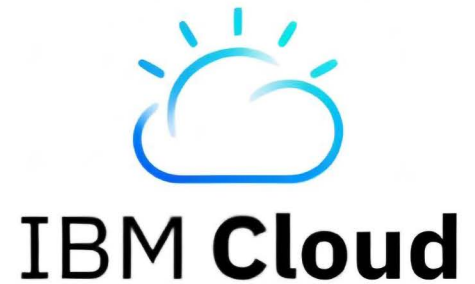


CLOUD COMPUTING SERVICE PROVIDER

3 DECEMBER 2021

IBM Cloud Services

IBM Cloud now has a technology foundation that includes security and portability across numerous clouds, as well as the ability to extend its resources and capabilities. IBM is attempting to reinvent itself as a hybrid cloud and artificial intelligence firm. In particular, IBM purchased Instana, a hybrid cloud application performance management firm, in 2020. Furthermore, IBM Cloud is a viable alternative for legacy applications, particularly databases that require a lot of memory. IBM lists 174 cloud services for analytics, containers, databases, developer tools, IoT, logging and monitoring, networking, storage, and security



Software as a Service (SaaS)

Software as a service, a cloud service provided by the cloud company. In SaaS, a customer provides software which can be either for a particular amount of time or for the lifetime. SaaS utilizes the internet and delivers the application to the customer. Most of the SaaS application does not require any downloads as they can use directly through the web browser.



Platform as a Service (PaaS)

Platform as a service is a framework for the developer where they can create an application for customizing the previously built application. This service also provided through the means of internet and here all the management is done by the enterprise or any third-party provider



Infrastructure as a Service (IaaS)

Infrastructure as a service, provided by the Cloud Service providers which help the customer to access and monitor things like computer, networking, and other services. In IaaS, the customer can purchase resources on demand rather than buying hardware which is costly and hard to maintain.



Reflection

Cloud computing is the delivery of computing resources over the internet. It can save us huge amount of money which allows us to save businesses from going bankrupt. Thus, companies around the globe can hire more staffs, and increase the quality of products. Cloud computing services can also have scalability which allows businesses to adapt to the environment easily. With that, there will be less risk for a business from facing problems.



- AWS IS THE NAME OF A CLOUD COMPUTING SERVICE PROVIDED BY AMAZON. WE CAN CONSIDER CLOUD COMPUTING AS ONE OF THE UTILITIES OF THE FUTURE. LIKE WATER AND ELECTRICITY, CLOUD COMPUTING IS A UTILITY.
- CLOUD COMPUTING PROVIDE USERS WITH CAPABILITIES OF COMPUTERS, BUT VIA THE INTERNET WITH PAY-PER-USE PRICING. THIS INCLUDES PROCESSING POWERS, DATABASES, STORAGES, APPLICATIONS, AND MANY OTHER IT RESOURCES.
- CLOUD SERVICES USE THE PAY-PER-USE PRICING, WHERE WE ONLY PAY FOR WHAT WE USE. IF WE USE LESS, THEN THE COSTS WILL BE LESS AS WELL.

CLOUD COMPUTING

BY AMAZON WEB SERVICES

MAIN FOCUS ON CLOUD COMPUTING

USE IT INFRASTRUCTURES AS A SOFTWARE

As opposed to the traditional method of infrastructures as a hardware, cloud computing allows us to use IT infrastructures as a software instead. This can save us resources, such as physical space for the hardware, physical security, maintenance staffs, capital expenditure, and electricity power. This can benefit the users in term of costs and physical spaces greatly.

ALL IMPLEMENTATIONS ARE JUST A CLICK AWAY

With cloud computing, users can rent just the services they need, for how long they need it. It is very flexible, where any upgrades can be done onto the services in just a few clicks. Not only this saves time, but the pay-per-use model means this saves money for the users as well.

CLOUD COMPUTING SERVICES MODELS

Cloud services have 3 service models, all varying depending on the user's needs. These are the:

- Infrastructure as a Service (IaaS)
 - IaaS offers to the user the most control over IT resources, and are suitable for large businesses and corporations.
- Platform as a Service (PaaS)
 - PaaS offers users some control over the IT resources, where the users can control their applications and data.
- Software as a Service (SaaS)
 - SaaS is for users to use the software they need only, and user have no control over the IT resources.

BENEFITS OF CLOUD COMPUTING SERVICES

NO EQUIPMENT EXPENSE

HIGH SCALABILITY

LOW COST

LESS RESOURCES AND STAFFS REQUIRED

INSTANT GLOBAL PRESENCE



REFLECTION

- Using a cloud solution for our business or private needs, such as Amazon Web Services, can help us to save a huge amount of capital that should have been required for our services. This allows us to redirect these saved capitals into other parts of the business, such as hiring more staffs or increasing quality of products.
- Cloud services also has high scalability, allowing for business to adapt to status of their business easily. Compared to using traditional IT methods, where scalability is an issue and involves risk, cloud services poses minimal to no risks for the business should their need to scale arises.
- All in all, cloud services offer the same services as using traditional IT methods and infrastructures, but with easier implementation and less capital requirements. For new upstarts to large enterprises, opting to use cloud services can significantly help to reduce the burden for their operations, and must always be considered.



CLOUD SERVICES DEPLOYMENT MODELS



CLOUD MODEL

FULLY ONLINE, WHERE NOTHING IS REQUIRED ON PREMISE TO USE THE SERVICES



ON-PREMISE MODEL

SERVICE IS FROM THE USER'S PRIVATE CLOUD, SEPARATED FROM PUBLIC CLOUD



HYBRID MODEL

COMBINES BOTH CLOUD AND ON-PREMISE MODEL, ALLOWING FOR SERVICES VIA BOTH METHODS



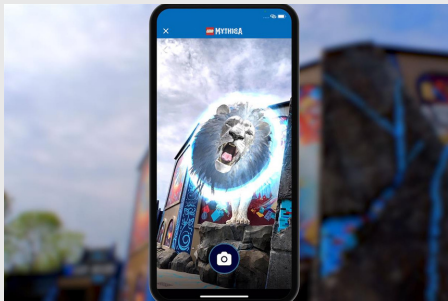
UTM INDUSTRY TALK 4 NEWSLETTER

2ND DECEMBER 2021

FIRST EDITION

6 MOST COMMON POSITION IN AR WORK

- AR/VR content developer
- AR/VR content strategist
- AR/VR user experience designer
- Designer, animator or sound artist specializing in AR/VR
- AR/VR community manager
- AR/VR project manager



5 THING CONSIDER WHEN CHOOSE YOUR CAREER

- Study data science and get a job in data
- Choose a job that cannot replace by robot. For example, jobs that require creativity, problem solving and communicate with people on a human level.

AUGMENTED REALITY A.R

Augmented Reality as known as AR is one of the 9 industrial technology in IR 4.0. AR is a technology that can overlay digital content or information over our natural world through some devices, one of the example is Pokemon Go, we can see pokemon in the reality through our phones. AR has achieved a lot of achievements in various fields such as Video Games, Healthcare, Engineering, Live Events, Video Entertainment, Real Estate, Retail, Military, Education and etc. Among all of this, Video Games have the highest expected revenue by industry by 2025 which is \$11.6 billion and there is only \$7million expected revenue for Education.

WHY MALAYSIA CAN'T USE AR IN CLOUD COMPUTING

The main reason of this is because of the internet connection in Malaysia is not that good, but if your WI-FI is fast, yes you can use it in cloud computing. This is because some AR is including many 3D element in it, so when your WI-FI didn't fast enough, then it will keep loading, lagging and delaying.



4 TYPES OF AR

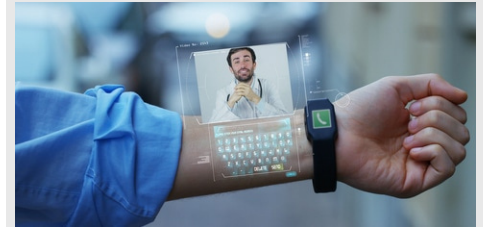
First of all is *marker-based AR*, this work by scanning a marker to activate the augmented experience . Next is *markerless AR*, this is almost the same with the marker-based AR but the user no need to scan the marker to activate it. After that we have *Projection-Based AR*, this is the simplest form of AR projects light onto the surface. The interaction occurs through physical contact with the projection surface. Last but not least, *Superimposition-Based AR*. involves partially or completely replacing the original view of an object with an enhanced view of the same object. In this type of AR, object recognition plays a vital role, because if the application cannot recognize the original object, it cannot replace the original object with an enhanced object. There are a lot of the example in our life such as IKEA Place App and the filter in Instagram, snapchat and etc.



REFLECTION

Actually AR is already being widely used in our life. In my opinion, I think the usage rate of AR will be much higher than VR in the future because VR is bring you to the other world and I think VR is used widely in Video Games field, but AR is different. We still in the real world and we can feel anything about this world. Few years ago, smartphone have replace many things in our life, such as camera, calculator and wallet and I think AR will be the next who will replace most things in our life. In future we no need to bring to much thing when we wanted to go outside, we just have to wear a AR Glasses or contact lens and we can see others basic information such as name and age, we also can use it to pay, chat and etc.

- Keep in touch with the job market and gain an in-depth understanding of what jobs are in demand and their average wages
- Be data savvy. For example we have to learn how to make decision and solve the problem using or according to data.
- Get familiar with Artificial Intelligence (AI).



3 KEY AREAS WHERE HUMANS BEAT MACHINES THAT ARE KEY TO FUTURE JOB CREATION

Creative endeavors

- Everything from scientific discovery to creative writing and entrepreneurship.

Social interaction

- Robots just don't have the EQ(emotional quotient or emotional intelligence) of humans.

Physical dexterity and mobility

- Thousands of years of climbing, lake swimming and dancing exercises have given humans extraordinary agility and physical dexterity