CLOUD COMPUTING

ANNUAL NEWSLETTER

NOVEMBER 2021

EXAMPLES

Microsoft Azure

Google Cloud Platform

IBM Cloud

Alibaba Cloud

VMWare

CLOUD COMPUTING SERVICE PROVIDER

Microsoft Azure

Microsoft Azure is a cloud computing service from Microsoft. Azure offers a range of software as a service (SaaS), platform as a service (PaaS), and infrastructure as a service (IaaS) options for deploying applications and services on Microsoft-managed data center infrastructure. Azure's 50 operating regions are more than any other cloud provider.

Google Cloud Platform

Google Cloud Platform is a suite of public cloud computing services offered by Google. The platform includes a range of hosted services for compute, storage and application development that run on Google hardware. Google Cloud Platform services can be accessed by software developers, cloud administrators, and other enterprise IT professionals over the public internet or through a dedicated network connection.

IBM Cloud

IBM Cloud is a suite of cloud computing services from IBM that offers both platforms as a service (PaaS) and infrastructure as a service (IaaS). With IBM Cloud IaaS, organizations can deploy and access virtualized IT resources -- such as compute power, storage, and networking over the intern.

Alibaba Cloud

Alibaba Cloud, also known as Aliyun, is a cloud computing company, a subsidiary of Alibaba Group. Alibaba Cloud provides cloud computing services to online businesses and Alibaba's own e-commerce ecosystem. Its international operations are registered and headquartered in Singapore.

VMWare

VMware, Inc. is an American cloud computing and virtualization technology company headquartered in California. VMware was the first commercially successful company to virtualize the x86 architecture.

COMPARISON

Azure machines are grouped into cloud services and respond to the same domain name with various ports whereas the AWS machine can be accessed separately.

IBM Cloud is a full-stack cloud platform that spans public, private, and hybrid environments.

Alibaba Cloud provides cloud computing services to online businesses and Alibaba's e-commerce ecosystem.

VMware Inc. is an American cloud computing and virtualization technology company headquartered in California.

Google Cloud computing is the delivery of different services through the Internet. These resources include tools and applications like data storage, servers, databases, networking, and software.

What is CCSP?

A cloud computing service provider is a third-party company offering a cloud-based platform, infrastructure, application, or storage services. Much like a homeowner would pay for a utility such as electricity or gas, companies typically have to pay only for the amount of cloud services they use, as business demands require.

FIKRI AKMAL AIZUDDIN BIN BAHRIM A21EC0025 • HAZIQ FARHAN BIN MARAJUDDIN A21EC0030 • FARAH AUNI MARDHATI BINTI ZAKARIA A21EC0173 • IQMAL AIZAT BIN MOHD ZAMRI A21EC0032 • NURAIN NAJWA BUKARI A21EC0117

REFERENCES

- Antonopoulos, N., & Gillam, L. (2010). Cloud computing. London: Springer. https://link.springer.com/book/10.1007%2F978-3-319-54645-2
- Copeland, M., Soh, J., Puca, A., Manning, M., & Gollob, D. (2015). Microsoft azure and cloud computing. In Microsoft Azure https://link.springer.com/chapter/10.1007/978-1-4842-1043-7_1
- Gulati, A., Holler, A., Ji, M., Shanmuganathan, G., Waldspurger, C., & Zhu, X. (2012). Vmware distributed resource management: Design, implementation, and lessons learned. VMware Technical Journal, 1(1), 45-64. http://w.waldspurger.org/carl/papers/drs-vmtj-mar12.pdf

Industry Talk 3
15 th NOVEMBER 2021

NEWSLETTER

AMAZON WEB SERVICES : CLOUD COMPUTING

Dr. Qusay Al-Maatouk
Lecturer of Asia Pacific University of Technology & Innovation (APU)

Summary

Data backup, disaster recovery, email, virtual desktops, software development and testing, big data analytics, and customer-facing web apps are just a few of the use cases that organisations of all types, sizes, and industries are embracing the cloud for. Healthcare organisations, for example, are utilising the cloud to produce more individualised treatments for patients. The cloud is being used by financial services businesses to power real-time fraud detection and prevention. The cloud is also being used by video game developers to deliver online games to millions of players all over the world.

DETAIL >

Definition of Cloud Computing

Cloud computing is the on-demand delivery of computing power, database, storage, applications, and other IT resources via the internet with pay-as-you-go pricing.

Advantages of Cloud Computing

The advantage is trade capital expense for variable expense where data center investment is based on forecast and pay only for the amount you consume. Others, the massive economies of scale because of aggregate usage from all customers, AWS can achieve higher economies of scale and pass savings on to customers. It also stops guessing capacity when overestimated and underestimated server capacity and scale on demand. The advantage can stop spending money on running and maintaining data centers like in investment, running data centers between business and customers.

INDUSTRY >

Amazon Web Services

Amazon Web Services (AWS) is the world's most comprehensive and broadly adopted cloud platform, offering over 200 fully-featured services from data centers globally. Millions of customers including the fastest-growing startups, largest enterprises, and leading government agencies are using AWS to lower costs, become more agile, and innovate faster.

REFLECTION >

Traditional IT systems are limited with the specs and hardware, contrary to cloud computing however, the developer only needs to worry about the infrastructure. The capability of cloud computing is wide, with many uses. Overall easier to maintain, can use multiple way to interact with server such as CLI, developer only had to worry more about the software and infrastructure.

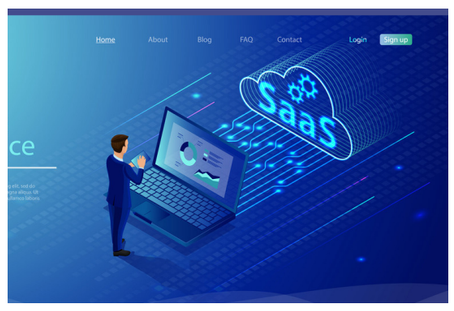
CLOUD SERVICE MODEL >

Infrastructure as a service (IaaS)

IaaS contains the basic building blocks for cloud IT. It typically provides access to networking features, computers (virtual or on dedicated hardware), and data storage space.

Platform as a service (PaaS)

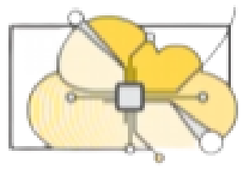
PaaS removes the need for you to manage underlying infrastructure (usually hardware and operating systems) and allows you to focus on the deployment and management of your applications.



Software as a service (SaaS)

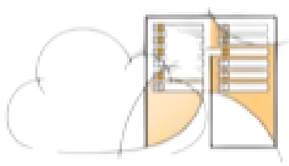
SaaS provides you with a complete product that is run and managed by the service provider. In most cases, people referring to SaaS are referring to end-user applications (such as web-based email).

CLOUD COMPUTING DEPLOYMENT MODELS >



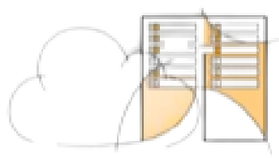
Cloud

The cloud deployment model supports all users who want to make use of a computing resource, such as hardware or software on a subscription basis.



Hybrid

In a hybrid cloud, an organization makes use of interconnected private and public cloud infrastructure



On-Premises (Private Cloud)

The private cloud is typically infrastructure used by a single organization.

FIKRI AKMAL AIZUDDIN BIN BAHRIM A21EC0025 • HAZIQ FARHAN BIN MARAJUDDIN A21EC0030 • FARAH AUNI MARDHATI BINTI ZAKARIA A21EC0173 • IQMAL AIZAT BIN MOHD ZAMRI A21EC0032 • NURAIN NAJWA BUKARI A21EC0117

REFERENCES

- Vennam, S. (2020). Cloud Computing. IBM. Retrieved from https://www.ibm.com/my-en/cloud/learn/cloud-computing
- Amazon Web Services. (2021). Retrieved from https://aws.amazon.com
- Laszewski, T. (2012). Migrating to the Cloud. Oracle Client/Server Modernization. Retrieved from https://www.sciencedirect.com/topics/computer-science/cloud-deployment-model

18TH NOV 2021

NEWSLETTER

AUGMENTED REALITY

THE CURRENT TREND IN INDUSTRY

SPEAKER DR RUZAMI MOHAMED
OZEL FOUNDER

SUMMARY

One of the digital industrial technologies is augmented reality, AR, which is highly focused on the interaction between humans and machines. The future of AR systems, which will be expected by 2025, lies in the video games industry as the highest and most profitable for investing in AR systems, followed by healthcare and engineering. The talk also mentioned two types of AR-based, superimposition-based, and projection-based where they become the beauty of AR to real-world applications.

FUTURE OF AUGMENTED REALITY

EDUCATION

Transforming to a better learning experiences the visual elements effectively help students examine the concepts in different angles like 3d holograms. Learning materials like laboratory experiment also can be accessed anywhere and safely held.

HEALTHCARE

The major role in the healthcare sector where it serves patients a clear understanding like on how the medication affects to the disease status. Visual-aided simulation can be aided by AR to represent the exact body part location for surgical progress, where can reduce a patient's life risk.

AUTOMOTIVE INDUSTRY

Application of AR gives a whole new driving experience. Besides, the navigation new innovation system, the heads-up display (HUDs) help to provide vehicle safety. AR will alert any hazards ahead or any malfunction of the car system on the display system.

TYPE OF AUGMENTED REALITY

Provides an 'alternate' view an object, either by replacing the whole object or partially to an augmented perspective into augmented reality.

SUPERIMPOSITION BASED

PROJECTION BASED

This one of the AR simplest systems is projection on a surface that can be interacted with with. For instance, holographic,virtual keypad displayed displayed on any surface, and we can interact on it and display its output like actual keyboard.

REFLECTION

AR eases out interaction between human and machine as many children spend a great deal of time playing digital games, therefore this may find that AR games are highly suitable to engage young students in learning. However, AR systems hardly track the movement or states of physical objects in real life situations, so it could create restricted opportunities of simulations that accompany more open-ended inquiry. Privacy and security problems are more likely to rise, thus this will lead to more risky behaviour such as false information as people hardly make a difference of what is real and what is not.

FIKRI AKMAL AIZUDDIN BIN BAHRIM
A21EC0025

HAZIQ FARHAN BIN MARAJUDDIN
A21EC0030

FARAH AUNI MARDHATI BINTI ZAKARIA
A21EC0173

IQMAL AIZAT BIN MOHD ZAMRI
A21EC0032

NURAIN NAJWA BUKARI
A21EC0117

REFERENCES

- Peddie, J. (2017). Types of Augmented Reality. Augmented Reality, 29-46. doi:10.1007/978-3-319-54502-8_2
- Visualizing as a Means of Understanding in the Fourth Industrial Revolution Environment. (2021). Teaching and Learning in the 21st Century, 53-70. doi:10.1163/9789004460386_004
- Krevelen, D. V., & Poelman, R. (2010). A Survey of Augmented Reality Technologies, Applications and Limitations. International Journal of Virtual Reality, 9(2), 1-20.doi:10.20870/ijvr.2010.9.2.2767