CLOUD COMPUTING SERVICE PROVIDER

EXAMPLE OF CLOUD COMPUTING SERVICE PROVIDER

Microsoft Azure   Alibaba Cloud   IBM Cloud   ORACLE CLOUD   Google Cloud

WHAT IS A CLOUD SERVICES PROVIDER?

"A cloud services provider is a company that supplies businesses and people with cloud computing-based services and solutions."

DESCRIPTION

- Microsoft Azure is the company's public cloud computing platform, formerly known as Windows Azure. That offers a variety of cloud computing, analytics, storage, and networking services. (TechTarget, 2020)

- Alibaba Cloud offers the services such as database, networking, security, analytics & big data, domains & web hosting, application services, media services, middleware, as well as other cloud products and services. (NetApp,2018)

- IBM cloud services give a full stack consisting comprises over 170 products and cloud computing services. Infrastructure as a service (IaaS), platform as a service (PaaS), and, more recently, software as a service (SaaS), with a particular emphasis on the latter (IaaS). (Developer, 2019)

- Oracle Cloud is a cloud computing service provided by Oracle Corporation, providing offers servers, storage, networking, applications, and services via the internet through a global network of Oracle Corporation managed data warehouses.

- Google Cloud Platform is a collection of public cloud computing services offered by Google. The platform includes a number of hosted computing, storage and application development services that run on Google hardware.

COMPARISON

In terms of the market share, Microsoft Azure has a total of 16% of the market while the newcomer Alibaba has 9.5% of the total market with Google has 8% of it and both IBM and Oracle each has 6% of the total market. The price per hour for each service is as follows Microsoft azure is 0.043 USD per hour, Alibaba is 0.046 USD per hour, IBM is 0.04 USD per hour, Oracle is 0.03 USD per hour and Google cloud is 0.0475 USD per hour. Each service offers a 12 month free trial except IBM that offers a free lite version of the services with 256MB of cloud found storage. Microsoft Azure is more diverse and manifold, not only that it also leads the PaaS segment of cloud service providers with a suite of tools. While Google stands out in big data, machine learning, and data science capabilities. Alibaba Cloud gives a vast set of PaaS and IaaS which might be similar in availability, overall performance, and protection to the carrier portfolios of different carrier cloud providers. Oracle Cloud has a sturdy partnership with Microsoft Azure in order that their clients can run their workloads throughout the 2 clouds.IBM Cloud is a feasible choice for legacy applications, specifically for memory-intensive databases. (Avenga,2021)

REFLECTION

From this, we learn how beneficial it is for cloud computing towards companies or individuals as it provides services that something normal computer cannot handle. We also know that each services provider has its own benefits and different kinds of service offers. By gaining the information about the difference of each service we can choose which one that perfectly suits our need and budget.

NOVEMBER 28, 2021

MUHAMMAD SAIFUDDIN BIN ISMAIL A21EC0093 - FARAH NABILAH BINTI NAJMUDIN A21EC0023 - MAATHUREE A/P VEERABALAN A21EC0051 - NUR SYAFIKA BINTI MOHD SALMIZI A21EC0115 - YUSRA NADATUL ALYEEA BINTI YUSRAMIZAL A21EC0151

Technology Information System

aws academy

CLOUD COMPUTING

By : Dr Qusay Al Maatouk AWS Academy

15TH NOVEMBER 2021

On November 15, 2021, we participated in the third Industry Talk for the subject of Technology Information System. The industrial talk was held virtually through the Cisco Webex platform. As usual, this talk requires students taking the SECP1513 course to attend and it is also open to other UTM students. This Industry Talk was delivered by Dr. Qusay Al-Maatouk, one of the representatives of Amazon Web Service (AWS) which is one of the companies that offers the use of cloud computing. This talk shared mainly about the importance and advantages of cloud computing in our lives especially in doing work and also about the implementation of AWS itself.

Cloud Computing has changed our lives in many ways as they develop the most efficient infrastructure as a software that offer the most cost-effective, improve agility and time-to-value, and scale more easily. There are many advantages of using cloud computing for everyday life activities such as banking, email, e-Commerce, shopping, media streaming and backup data and files. Thus, the challenges to switch to cloud computing it takes time to transfer data. Generally, cloud services provide different types of cloud such Private Cloud, Public Cloud, Community Cloud and Hybrid Cloud that specify for each organization needed. Overall, Cloud Computing compatible the each uses for networking through the future world globalization.

Organized by:

UTM
T.I.S (SECP1513) COURSE
Applied Computing | School of Computing | Faculty of Engineering
Industry Led Curriculum

AMAZON WEB SERVICES
CLOUD COMPUTING

15th NOV 2021

3.00 to 4.30 pm

Speaker
Dr. Qusay Al-Maatouk
Lecturer

Online Via
webex by CISCO

Moderator
Dr. Layla Rasheed Abdallah Hasan
TIS Lecturer

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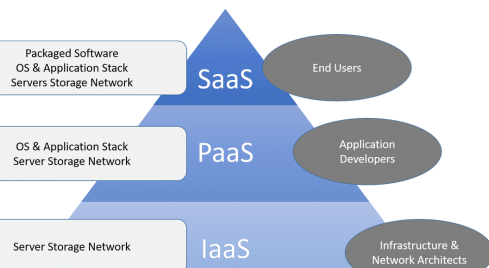
WHAT IS CLOUD COMPUTING?

"The on-demand delivery of compute power, database, storage, applications and other IT resources via the Internet with pay-as-you-go pricing"

INFRASTRUCTURE

In the talk, the speakers also discussed the differences between cloud computing models and traditional models. The traditional model is hardware while the cloud computing model is software. Hardware requires space, staff, physical security, planning, capital expenditure while software is more flexible as it does not require location changes. Next, traditional models have long hardware procurement cycles while cloud computing models can evolve more quickly, easily and cost effectively than hardware solutions. Finally, the hardware model requires us to provide capacity by guessing the theoretical maximum peak while the software model can eliminate undifferentiated weight lifting tasks.

Cloud Service Models

Packaged Software OS & Application Stack Servers Storage Network	SaaS	End Users
OS & Application Stack Server Storage Network	PaaS	Application Developers
Server Storage Network	IaaS	Infrastructure & Network Architects

Source: https://medium.com/@raghav0278/what-is-cloud-computing-how-does-cloud-computing-work-and-its-uses-31d5af3f5c25

ADVANTAGES

There are many advantages of cloud computing such as trading capital expenditure for variable expenditure because we only have to pay for the amount we use. It also has great sales economy because of the aggregate consumption of all customers. We can also stop guessing server capacity because cloud computing can automatically downsize servers when estimated too high and add servers when they are underestimated. Cloud computing can also be done in improve speed and agility and we also don't have to spend money to run and maintain a data center. Finally, cloud computing is also possible for go global in minutes.

WHAT ARE WEB SERVICES?

Any piece of software that makes itself available over the Internet and uses a standardized format - such as Extensive Markup Language (XML) or JavaScript Object Notation (JSON) - for the request and the response of an Application Programming Interface (API) interaction

Request message

Client — Internet — Web Service

Response message
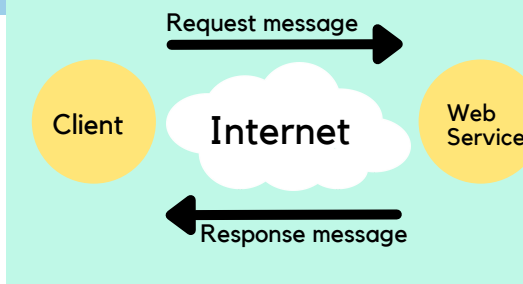
WHAT IS aws?

"AWS is a secure cloud platform that offers a broad set of global cloud-based products. It provides on-demand access to computing, storage, networking, databases and other IT resources as well as management tools. AWS also offers flexibility because you only pay for the individual services you need and it also works like a building block"

There are seven services provided by AWS such as compute services, storage services, database services, Security, Identity and Compliance services, Networking and Content Delivery services, Management and Governance services and lastly, AWS Cost Management services.

Total Cost of Ownership (TCO) is a financial estimate that helps identify the direct and indirect costs of a system. It is used to compare the cost of running an entire infrastructure or specific workload on-premises and on AWS. It also budgets and builds business cases for cloud migration and lastly, TCO Considerations (Server Cost, Storage Cost, Network Cost & IT Labor Cost).

There are 3 ways to interact with AWS, by using AWS Management Console which is an easy-to-use graphical interface. Second, the Command Line Interface (AWS CLI) is used to access services with discrete commands or scripts. Finally, Software Development Kits (SDKs) is used to access services directly from your code such as Java, Python and others.

### Similarities Between Traditional IT and AWS

TRADITIONAL, ON PREMISES IT SPACE	TYPES	AWS
Firewall, ACLs, Administrators	SECURITY	Security groups, Network ACLs, IAM
Router, Network pipeline, Switch	NETWORKING	Elastic Load Balancing, Amazon VPC
On-premises server	COMPUTE	AMI → Amazon EC 2 instances
DAS, SAN, NAS, RDBMS	STORAGE AND DATABASE	Amazon EBS, Amazon EFS, Amazon S3, Amazon RDS

We learned about the benefits and importance of cloud computing in giving us access to information. As we all know, cloud computing was one of the enabling technologies that contributed to the 4th Industrial Revolution. So, it is very important for us to know about the use of cloud computing in our daily activities.

Unbeknownst to us, this cloud computing is widely used by us especially while doing course related assignments and it facilitates us just by bringing our device and connecting it to the internet to get its use. Amazon Web Services is among the affordable cloud computing that we can use because there are many uses that we can get from using it according to our task or work. Therefore, we need to master the use of cloud computing as our preparation to the invention of new technologies.

Types of Cloud Deployment

Public Cloud
Typically have massive amounts of available space, which translates into easy scalability. Recommended for software development and collaborative projects.

Private Cloud
Usually reside behind a firewall and are utilized by a single organization. Recommended for businesses with very tight regulatory requirements

Hybrid Cloud
Combine public clouds with private clouds to allow the two platforms to interact seamlessly. Recommended for businesses balancing big data analytics with strict data privacy regulations.

Community Cloud
A collaborative, multi-tenant platform used by several distinct organizations to share the same applications. Users are typically operating within the same industry or field.

Source: https://www.turningcloud.com/blog/cloud-deployment-models/

GROUP 5 (SECP1513-01)

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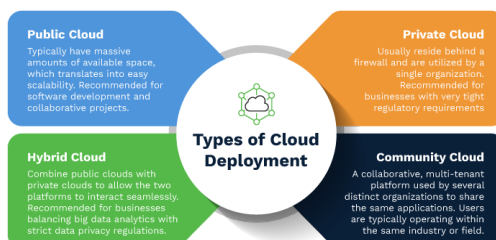
TECHNOLOGY INFORMATION SYSTEM
OF
AUGMENTED REALITY

NEWSLETTER

CURRENT TRENDS OF AUGMENTED REALITY IN INDUSTRY

BY DR RUZIMI MOHAMED FOUNDER OF OZEL SDN BHD

SUMMARY OF THE TALK

INDUSTRY 4.0 IS THE DIGITAL TRANSFORMATION OF MANUFACTURING OR PRODUCTION AND RELATED INDUSTRIES AND VALUE CREATION PROCESSES. AUGMENTED REALITY IS ALSO KNOWN AS AR. AUGMENTED REALITY DEVELOPS THE PHYSICAL WORLD WITH THE HELP OF TECHNOLOGY. IT IS ALSO EMERGING AS ONE OF THE MOST POTENTIAL TECHNOLOGY WHICH CAN BRING A HUGE IMPACT IN THE FUTURE. IT IS A TECHNOLOGY THAT OVERLAYS VIRTUAL THINGS ON THE REAL-WORLD SCENE IN REAL-TIME WHERE IT USES THE PRE-EXISTING ENVIRONMENT AND ADDS PIECES OF INFORMATION TO IT AND BRINGS AN OUTPUT OF AN ARTIFICIAL ENVIRONMENT. AR COMBINES THE VIRTUAL AND REAL WORLD BY USING COMPUTER VISION WHICH PROVIDES REAL-TIME INTERACTION WITH THE HELP OF CAMERAS TO RECOGNIZE AND CAPTURE OBJECTS.

CONTEMPLATION

THERE ARE SO MANY CHALLENGES OF THE 4 INDUSTRIAL REVOLUTIONS TO FACE ESPECIALLY WHEN IT IS RELATED TO AUGMENTED REALITY WHICH IS THE MOST UNPRECEDENTED TODAY. WE MUST BE COMPETITIVE AND INNOVATIVE TO MAKE OUR NEW TECHNOLOGY LIFE BECOMES SIGNIFICANT . THE DEVELOPMENT OF THE WORLD WILL MAKE OUR IMAGINATION MORE FORWARD AND ALLOW US TO ACHIEVE MORE VICTORY FURTHER. WE MUST BE CAPABLE TO DO ANYTHING WE COULD COMPARE WITH OUR ABILITY TO MAXIMIZE OUR PRIVILEGE AS HUMAN BEINGS.

ISSUES OF THE TALK

AR CAN BE CLASSIFIED INTO 3 BASED WHICH ARE **MARKER BASED, PROJECTION BASED, SUPERIMPOSITION BASED**. TO FACE THE 9 DIGITAL ERAS IN THE FUTURE, 10 SCOPE SKILLS ARE VERY USEFUL FOR FUTURE JOBS. AND TO SUM UP THERE ARE 3 KEY AREAS WHERE HUMANS CAN BEAT THE MACHINE WHICH IS THE KEY TO FUTURE JOB CREATION.

- CREATIVE ENDEAVORS
- SOCIAL INTERACTION
- PHYSICAL DEXTERITY AND MOBILITY

THE FUTURE OF AUGMENTED REALITY SHOWS THAT THE MOST RELEVANT INNOVATION IS IN VIDEO GAMES WILL BE INCREASED AND IT HAS BEEN EXPECTED BY THE INDUSTRY WITHIN 2025.

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