CLOUD COMPUTING SERVICE PROVIDER

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SUMMARY

Explanation of cloud computing in detail through its functions. Five cloud computing service providers, that is, Microsoft Azure, Google Cloud, Alibaba Cloud, Oracle Cloud and IBM Cloud are described thoroughly. They are then compared between one another based on cloud offerings, cost and locations.

EXAMPLES

Microsoft Azure

Google Cloud

Alibaba Cloud

IBM Cloud

ORACLE CLOUD

DISCRIPTION OF CLOUD COMPUTING SERVICES

Cloud computing is the on-demand, pay-as-you-go distribution of IT services over the Internet. Instead of purchasing, operating, and maintaining physical data centres and servers, you can use a cloud provider like Microsoft Azure, Google Cloud Processing, Alibaba Cloud, IBM Cloud, and Oracle Cloud to access technological services such as computing power, storage, and databases on an as-needed basis.

Microsoft Azure is the second place besides AWS for the best cloud computing services providers. The organisation offers a wide range of business-oriented services. Microsoft Azure delivers tons of new products, services, and updates every quarter as a result of years of research and development. Azure is the best-in-class hybrid cloud among other cloud vendors, with the capacity to immediately provision computer resources on-demand.

After Amazon Web Services and Microsoft Azure, **Google Cloud** is ranked third in Gartner's Magic Quadrant of cloud providers. 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 year. Furthermore, Firebase, a Google-owned cloud mobile Backend-as-a-Service (BaaS) platform, has expanded quickly and is widely used by developers. Despite being built on top of Google Cloud, Firebase remains a popular BaaS platform.

Alibaba Cloud is ranked fourth among cloud service providers by Gartner. It was founded in 2009 to provide platform support to the Alibaba Group, but it is currently selling a variety of cloud services to organizations around the world.

After AWS, Microsoft Azure, Google Cloud, and Alibaba, **Oracle Cloud** is ranked fifth among cloud providers. Oracle Cloud is offered in 29 cloud regions throughout the world. Oracle clients can split their applications across at least three fault domains within each region, protecting them against typical hardware or power outages. Some areas have three availability domains, each with three fault domains, adding another layer of high availability and resiliency. Oracle cloud regions can deliver enterprise SaaS solutions like Oracle Supply Chain Planning, Oracle Fusion Cloud ERP, and Oracle Human Capital Management, in addition to customer workloads.

Lastly, **IBM Cloud** is ranked sixth among cloud service providers. Rather than competing directly with the major cloud service providers, IBM has partnered with Red Hat to accelerate hybrid cloud services throughout its portfolio. 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, thanks to the acquisition of Red Hat. In the next three years, IBM expects to double Red Hat sales.

COMPARISON BETWEEN THE FIVE CLOUD SERVICE PROVIDERS

It is hard to differentiate between cloud service providers but as we carefully compare, we can distinguish one cloud service provider from another, even if it is a small difference.

One of the differences is when it comes to **cloud offerings**. Microsoft Azure top the list with more than 600 services, followed by Alibaba Cloud that offers 200 products in China. 100 products are provided by Google Cloud which then is grouped into six categories, that is, storage, databases, computing and hosting, networking, big data, and machine learning. IBM and Oracle, on the other hand, have 174 and 65 cloud services respectively.

In terms of **cost**, Microsoft Azure is known to be quite expensive than others. Some rather use Google Cloud as it is affordable compared to Microsoft Azure. The cloud service provider with lower cost is Alibaba Cloud which is around 25% lower than others. For Oracle, on the other hand, factors such as CPU and memory usage affect the pricing. IBM's pricing is based on negotiated rates and they do provide discounts for monthly usage.

We can also see the differences between cloud service providers according to their **locations**. Microsoft Azure is considered to be more available than other cloud service providers. It has 53 regions. Google Cloud is accessible in over 200 countries. It is divided into 25 regions. Alibaba operates in 23 regions and has 69 availability zones throughout the world. Oracle is offered in 29 cloud regions throughout the world. The IBM cloud network has 60 data centres and six multi-zone regions.

REFLECTION

As we can see from all the descriptions and comparisons of the chosen cloud computing service providers, we can see that cloud computing gives great contributions to human life's **security**. All the chosen cloud computing company is most vocal about security offerings. Each year, they invest a sum of money in cybersecurity research and development. From this research, they offer their multi-layered security as a solution for us to take advantage of our information **without losing or leaking the classified data** from a hacker.

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Current Trend of

AUGMENTED REALITY

In Industry

18 NOV 2021

Contents

Future of Augmented Reality

According to MarketsandMarkets, the expected revenue by industry in 2025 found out that the video games will be the highest ranking which is worth 11.6B and the second will be the healthcare for 5.1B. The following is Engineering which is 4.7B. these are the top 4 highest revenue for the prediction.

AR in future uses Cases

The first expect that will cover is education. Students could learn the knowledge of different subject such as planet, geography, or even human body and all educational materials will be digital and interactive. AR is an important trend for the clothing retail industry, such as Uniqlo, Nike, Adidas For example, customer can see their jacket, footwear, makeup by using this virtual fitting room technology and smart Mirror is the another way to use Augmented Reality to serve this type of experience. Ar, Vr, AI, 5g nework & NFT is the keys that entering Metaverse. It is the next step of the internet evolution. Users could play after working or staying connected with friends within a digital universe.

Work position in Augmented Reality

There are some position in the AR fields which is AR / VR content develop, AR/VR content strategist, AR/VR user experience designer, AR/VR community manager & AR/VR project manager.

Key Areas why AI cannot replace human in current situation

Creativity is the act of turning new and imaginative ideas into reality which is a skills that cannot learn by the AI in current situation. Except for the creativity, emotional intelligence is one of the difficulty that we facing during AI industry because they cannot imitate emotion, such as empathy. Computer cannot think critically and this cause that AI cant replace human. They can only present us the numbers and data to inform us the possible options, we are the ones who make the critical decision in the end. This is one of the reason that AI cannot make decision for our humans.

Reference

Andrew, M (1). 10 Augmented Reality Trends in 2021. Retrieved February 1, 2021, from https://mobidev.biz/blog/augmented-reality-future-trends-2018-2020

Title: current trend of augmented reality in industry
Speaker: Dr Ruzimi Mohamed Founder of OZEL

Reflection

In this industrial talk, it makes me more clear about how does Augmented Reality will affect our technology. AR will become one of the technology that is necessary for life in the next generation. In next few decades, it will become a digital world likes Metaverse, we need to keep in track so that we will not felt left behind.

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AMAZON WEB SERVICES CLOUD COMPUTING

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SUMMARY

Cloud Computing was explained in detail through cloud computing models, deployment models and similarities between Amazon Web Services (AWS) and traditional IT. The advantages of cloud computing were also discussed thoroughly. Besides, there's also an explanation on how AWS works through categories of AWS services, ways to interact with AWS, AWS Pricing Calculator and Support Plan.

CLOUD COMPUTING AND AWS 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. AWS is the actual name for cloud computing, cloud computing is just a marketing term. The actual thing is a series of web servers.

There are three types of cloud sevice provide in AWS: Infrastructure as a Service (IaaS), Platform as a Service (PaaS), Software as a Service (SaaS). Also there are three types of cloud computing models like cloud, hybrid an on premises (private cloud).

WEB SERVICES

A web service is any piece of software that makes itself available over the internet and uses a standardized format - such as Extensible Markup Language (XML) or JavaScript Object Notation (JSON) - for the request and the response of an application Programming Interface (API) interaction

WHY CHOOSING AWS COMPUTING?

AWS is the number one choice of cloud computing of service providers instead of Microsoft Azure, IBM Cloud and others. It is because AWS Cloud give more advantages for the example AWS pay only for the amount you consume (like electricity). Because of aggregate usage from all customers, AWS can achieve higher economies of scale and pass savings on to customers. Moreover, AWS can accurately scale your needs according to demand, faster getting resources, less to worry about and go global in minutes.

REFLECTION

As you can see, Cloud Computing seems to be the future of business as it is cheaper, easier to use and modify, and more accurately meets your needs compared to traditional IT models. With AWS being one of the most important companies in that field, learning about how to work with AWS will surely be a good career move for any IT student.

WHAT DOES AWS OFFERS TO THE TRAINEES?

Aws offers a lot if services (Security, Database, Storage)
This training will teaches you how to adapt a customer's needs into AWS services.

Ways to interact with AWS are AWS Management Console,Command Line Interface (CLI),Software Development Kits(SPKs).

There is also the **AWS Pricing Calculator**, used to estimate monthly costs, identify opportunities to reduce monthly cost, model your solutions before building them, explore price points and calculations behind your estimate, find the available instance types and contract terms that meet your needs, name your estimate and create and name groups of services

AWS offers 4 Support plans: **Basic Support**: Resource Center access, Service Health Dashboard, product faqs, discussion forums,and support for health checks,**Developer Support**: Support for early development on AWS, **Business Support**: Customers that run production workloads, and **Enterprise Support**: Customers that run busiess and mission- critical workloads.

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Presented by: Dr Qusay Al-Maatouk (APU)

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