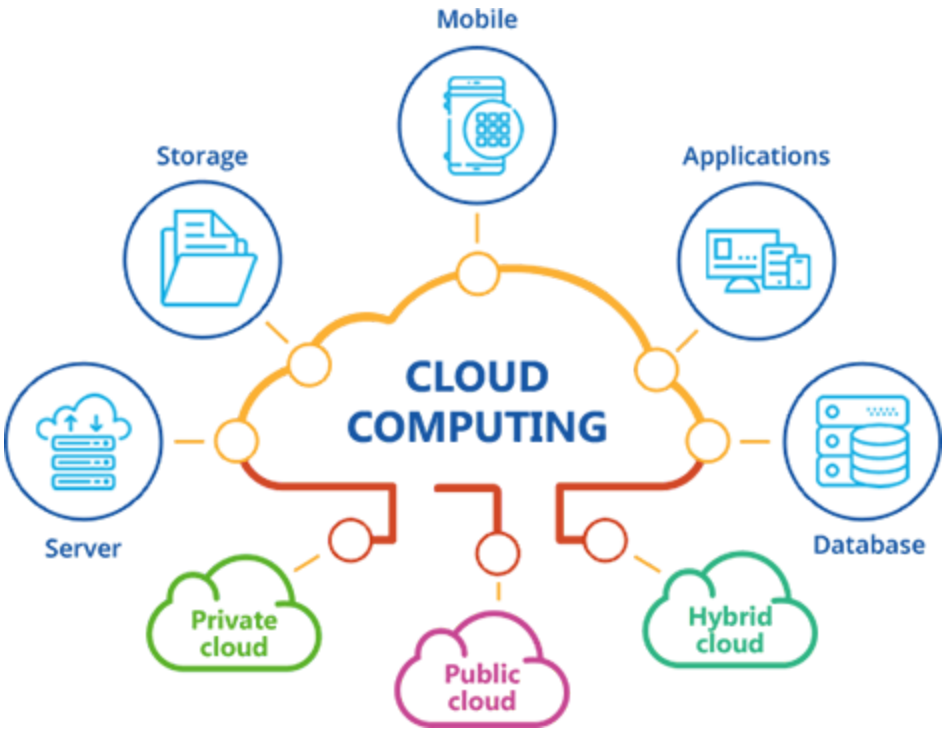
Task 6: Cloud Computing

Difference between AWS, AZURE, GOOGLE CLOUD PLATFORM

Introduction: What is Cloud Computing?



Simply put, cloud computing is the delivery of computing services—including servers, storage, databases, networking, software, analytics, and intelligence—over the Internet ("the cloud") to offer faster innovation, flexible resources, and economies of scale. You typically pay only for cloud services you use, helping lower your operating costs, run your infrastructure more efficiently and scale as your business needs change.

What is AWS?

Amazon Web Services is a widely used secure cloud services platform, offering computing power, content delivery, database storage, and other functionality to help businesses scale and grow.

What is Azure?

Azure is an open-source and flexible cloud platform that helps in development, service hosting, service management, and data storage. The Azure cloud computing tool hosts web applications over the internet with the help of Microsoft data centers.

What is Google Cloud Platform?

Google launched the Google Cloud Platform(GCP) in 2011. This cloud computing platform helps a business to grow and thrive. It also helps you to take advantage of Google's infrastructure and providing them with services that are intelligent, secure, and highly flexible.

Differences between AWS, Azure, and Google Cloud Platform

Establishment:

Amazon Web Services

Amazon Web Services is a subsidiary of amazon.com, which provides an on-demand Cloud Computing platform to individuals, companies, and governments on a paid-subscription basis.

Amazon Web Services is the oldest and the most experienced player in the cloud market. As one of the oldest cloud providers, it has established a bigger user base, as well as bigger trust and reliability factors.

AWS was publicly launched in 2006 with service offerings such as Elastic Compute Cloud (EC2), Simple Storage Service (Amazon S3), etc. By 2009, Elastic Block Store (EBS) was made public, and services such as Amazon CloudFront, Content delivery network (CDN), and more formally joined the AWS Cloud Computing Service offerings.

Microsoft Azure

Microsoft Azure, initially called Azure, was launched in 2010 with the intent to provide a competent Cloud Computing platform for businesses. Azure was renamed as ‘Microsoft Azure’ in 2014, though the name ‘Azure’ is still commonly used. Since its inception, Microsoft Azure has shown great progress among its competitors.

Google Cloud Platform

Google Cloud Platform (GCP), which is offered by Google, is a suite of Cloud Computing services that runs on the same infrastructure that Google uses internally for its end-user products such as Google Search engine, YouTube, and more.

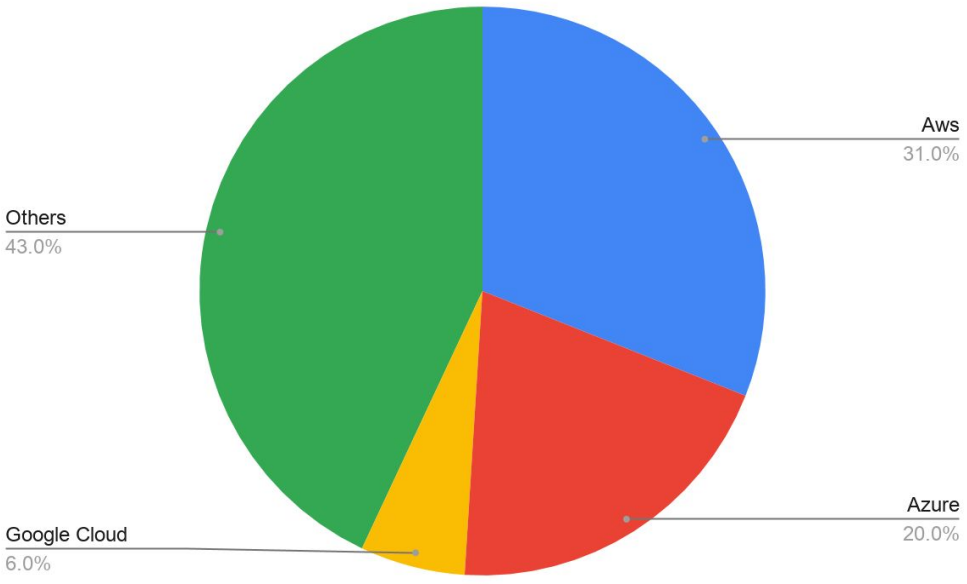
Google Cloud Platform began its journey in 2011, and in less than a decade it has managed to create a good presence in the cloud industry. The initial intent of Google Cloud was to strengthen Google's products such as Google Search engine and YouTube. But now, they have also introduced their enterprise services so that anyone can use Google Cloud Platform which shares the same infrastructure as that of Google Search or YouTube.

Market Shares and Growth Rate:

In terms of the cloud market, AWS has been on the top for as long as anyone can remember. If you take a look at the following graph, it depicts that:

- AWS is leading with around 31 percent of public cloud share in its name.
- Microsoft Azure is in the second place, owning around 20 percent of the worldwide market share.
- Google, in third place, owns up to 6 percent of the market share worldwide.

Even though both Microsoft Azure and GCP are lagging behind AWS, when it comes to market shares, they have shown a tremendous growth rate. The following graph shows that, as of 2020, GCP has shown a growth rate of 83 percent while Microsoft Azure is in the second place with a 75 percent growth rate and AWS, in third place, with 41 percent growth rate.



Services Provided:

Vender	Storage Services	Database Services	Backup Services
AWS	• Simple Storage Service (S3) • Elastic Block Storage (EBS) • Elastic File System (EFS) • Storage Gateway • Snowball • Snowball Edge • Snowmobile	• Aurora • RDS • DynamoDB • ElastiCache • Redshift • Neptune • Database migration service	• Glacier
AZURE	• Blob Storage • Queue Storage • File Storage • Disk Storage • Data Lake Store	•SQL Database • Database for MySQL • Database for PostgreSQL • Data Warehouse • Server Stretch Database • Cosmos DB • Table Storage • Redis Cache • Data Factory	• Archive Storage • Backup • Site Recovery
Google Cloud	•Cloud Storage • Persistent Disk • Transfer Appliance • Transfer Service	•Cloud SQL • Cloud Bigtable • Cloud Spanner • Cloud Datastore	• None

Who Uses Them?

Since AWS is the oldest player in the cloud market, it has bigger community support and user base. Therefore, AWS has more high-profile and well-known customers like Netflix, Airbnb, Unilever, BMW, Samsung, MI, Zynga, etc.

Azure is also gaining its share of high-profile customers with time. As of now, Azure has almost 80 percent of Fortune 500 companies as its customers. Some of its major customers are Johnson Controls, Polycom, Fujifilm, HP, Honeywell, Apple, etc.

Google, on the other hand, shares the same infrastructure as that of Google Search and YouTube and, as a result, many high-end companies have put their faith in Google Cloud. Major clients of Google Cloud are HSBC, PayPal, 20th Century Fox, Bloomberg, Dominos, and more.

All these cloud providers offer various cloud computing services that are required for any basic business. The difference occurs in the number of services provided by these cloud platforms.