AMITY SCHOOL OF ENGINERRING & TECHNOLOGY

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LAB-1

Introduction to various cloud service providers and comparison between these service providers.

Student Name: Vikas Rajbhar

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Enrollment Number: A70405219037

Faculty In-charge
{Department of CSE}
ASET, AUM

AIM: Introduction to various cloud service providers and comparison between these service providers.

- **1: Introduction to Cloud Service Providers?**

Sol^n : A cloud 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.

Besides the pay-per-use model, cloud service providers also give companies a wide range of benefits. Businesses can take advantage of scalability and flexibility by not being limited to physical constraints of on-premises servers, the reliability of multiple data centers with multiple redundancies, customisation by configuring servers to your preferences and responsive load balancing which can easily respond to changing demands. Though businesses should also evaluate security considerations of storing information in the cloud to ensure industry-recommended access and compliance management configurations and practices are enacted and met.

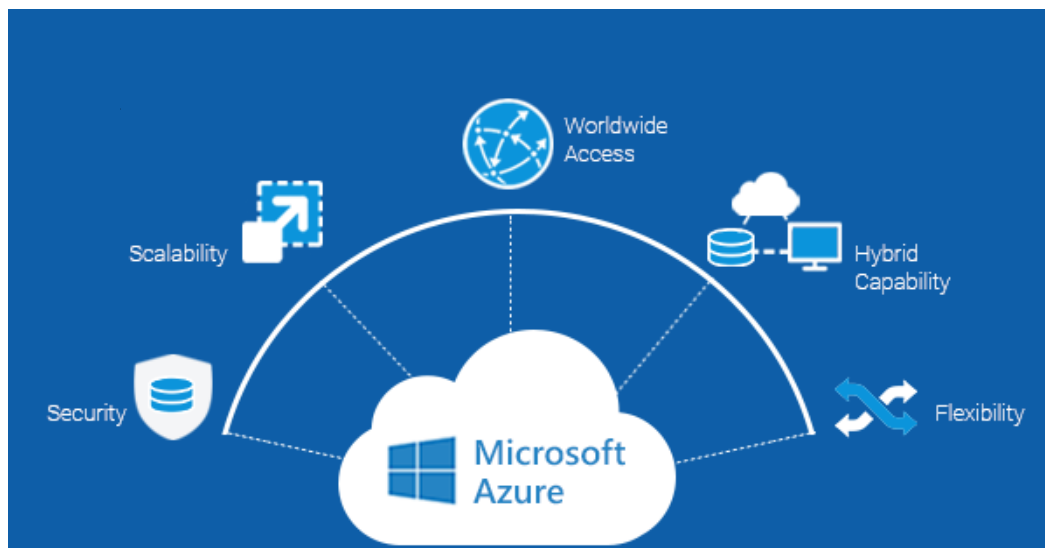- **2: Three CSPs**

a) **MS Azure**

b) **GCP**

c) **AWS**

Sol^n :

MS 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.

GCP: 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 own 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.

AWS: 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.

Comparison between AWS , GCP, MS Azure:

AWS	GCP	MS Azure
AWS came into the market in the Year **2006**	GCP Launched in the year **2008**	GCP Launched in the year **2008**
AWS is Friendly with the open-source model from the beginning.	GCP offers managed open source services that are tightly integrated into Google Cloud.	Azure has not so good a relationship with the open-source community
AWS offers a variety of storage options like $3 for object storage. EBS for block storage and EFS for file storage	GCP offers cloud storage for object storage. Persistent Disk for block storage, and file store for file storage	Azure Storage includes object, file, disk, queue, and table storage. They also have specialized services
AWS provides glacier for backing up your data	GCP does not provide any backup service yet	Azure provides "Azure backup" for backing up your data
AWS charges you on hourly basis	GCP charges you on per second billing basis	Azure charges you on per minute basis
In AWS, if you have to manage a package, you need to integrate external software or a third party software like Artifactory.	Artefact Registry is a single place for your organisation to manage container images and language packages (such as Maven and npm)	Azure has a package manager tool called Azure Artifacts to manage the packages like Nuget, Maven, etc.
Amazon Relational Database Service	Google Cloud SQL	SQL Database