

Differentiate the cloud providers (AWS, Azure, GCP)

PARAMETERS	AMAZON WEB SERVICES	MICROSOFT AZURE	GOOGLE CLOUD PLATFORM
1.DEFINITION	AWS is a cloud computing platform provided by Amazon. It offers a comprehensive suite of over 200 services, including computing power, storage options, machine learning, analytics, databases, and more.	Azure is Microsoft's cloud computing platform, providing a wide range of services for computing, analytics, storage, and networking. It supports various operating systems, programming languages, frameworks, databases, and devices.	GCP is Google's cloud computing platform, offering a suite of cloud services, including computing, storage, databases, machine learning, and data analytics. It leverages Google's infrastructure and technologies.
2. Service Offerings	Offers a broad and extensive range of services, with a focus on Infrastructure as a Service (IaaS) and Platform as a Service (PaaS).	It provides a comprehensive set of services and is known for its strong integration with Microsoft products. Offers a variety of services, including IaaS, PaaS, and Software as a Service (SaaS).	Emphasizes data analytics, machine learning, and containerization. Known for its strong offerings in big data and artificial intelligence.

3.Global Infrastructure	It has a vast and well-established global infrastructure with data centers in numerous regions around the world.	Expanding its global presence rapidly, with data centers in many regions. Often integrates well with existing Microsoft-based infrastructure.	has a growing global footprint with data centers strategically located. Offers high-performance computing and data analytics services.
4.Pricing Models	Known for its pay-as-you-go pricing model, where users pay for the resources, they consume. Offers various pricing options, including reserved instances and spot instances.	Utilizes a similar pay-as-you-go pricing model, with discounts available for reserved instances. Offers hybrid licensing options for customers with existing Microsoft licenses.	Follows a pay-as-you-go pricing model and provides sustained use discounts. Offers committed use discounts for committed usage of resources.
5.Integration with Other Technologies:	It integrates well with a wide range of third-party tools and services. It has a large ecosystem of partners and a vibrant marketplace.	Provides seamless integration with Microsoft products and services. Offers hybrid cloud solutions for businesses with on-premises infrastructure.	It integrates well with open-source technologies. Offers Kubernetes for container orchestration and TensorFlow for machine learning.

6.Market Share	Holds a significant market share and is often considered a leader in the cloud services market.	It has seen substantial growth and is considered a strong competitor, particularly in enterprises.	It has been gaining traction, especially in industries that value data analytics and machine learning capabilities.
7.Identity and Access Management (IAM):	Uses AWS Identity and Access Management (IAM) for access control and permissions.	Employs Azure Active Directory (AD) for identity management, providing seamless integration with Microsoft's on-premises AD.	Utilizes Google Cloud Identity and Access Management for controlling access to resources.

8.Networking Services:	Offers Amazon VPC (Virtual Private Cloud) for networking, with a variety of services like AWS Direct Connect, Elastic Load Balancing, and Amazon Route 53.	Provides Azure Virtual Network, Azure Load Balancer, and Azure DNS, among other networking services.	Offers Google VPC, Cloud Load Balancing, and Cloud DNS as part of its networking services.
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9.Container Orchestration:	Supports Kubernetes through Amazon EKS (Elastic Kubernetes Service).	Provides Azure Kubernetes Service (AKS) for container orchestration.	Pioneered Kubernetes and provides Google Kubernetes Engine (GKE) for managing containerized applications.
10.Machine Learning and AI Services:	Offers a wide range of AI and machine learning services, including Amazon SageMaker, Polly, Recognition, and Comprehend.	Provides Azure Machine Learning, Cognitive Services, and Azure Bot Services.	Known for its strength in machine learning with services like TensorFlow, Cloud AI Platform, and AutoML.
11.Storage Options:	Offers Amazon S3 for object storage, Amazon EBS for block storage, and Amazon Glacier for cold storage.	Provides Azure Blob Storage, Azure Managed Disks, and Azure Archive Storage.	Offers Cloud Storage for object storage, Persistent Disks for block storage, and Cloud Storage Nearline for archival storage.

12.Serverless Computing:	Features AWS Lambda for serverless computing and other services like API Gateway	Offers Azure Functions for serverless computing, along with Azure Logic Apps and Azure API Management.	Provides Cloud Functions for serverless computing and Cloud Run for containerized serverless applications.
13.Databases:	Offers a variety of managed databases, including Amazon RDS, DynamoDB, and Amazon Aurora.	Provides Azure SQL Database, Cosmos DB, and Azure Database for MySQL, PostgreSQL, and MariaDB.	Offers Cloud SQL, Cloud Spanner, and Cloud Firestore, among other managed database services.

14.Market Focus:	Widely used across various industries and is often the first choice for startups and enterprises alike.	Strong presence in enterprises, especially those heavily invested in Microsoft technologies.	Attracts organizations with a focus on data analytics, machine learning, and open-source technologies.
15.App Testing	It uses device farm.	It uses DevTest labs.	It uses Cloud Test labs.
16.API Management	Amazon API gateway	Azure API gateway	Cloud endpoints
17.Data Warehouse	Redshift	SQL warehouse	Big Query
18.Maximum processors in VM	128	128	96

19.Load Balancing Configuration	Elastic Load Balancing	Load Balancer Application Gateway	Cloud Load Balancing
20.Virtual Network	VPC	VNet	Subnet
21.File Storage	EFS	Azure Files	ZFS and Avere
22.Users	<ul style="list-style-type: none"> • Coursera • Expedia • Netflix • Coinbase • Formula 1 	<ul style="list-style-type: none"> • Bosch • Audi • ASOS • HSBC • Starbucks • Walgreens 	<ul style="list-style-type: none"> • Toyota • PayPal • Nintendo • Spotify • Twitter
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