**What is Cloud Computing?**

On-demand delivery of IT resources over the internet with pay-as-you-go pricing.

Access to computing services like storage, databases, servers, networking, software, and analytics without direct ownership of physical infrastructure.

Scalability and flexibility to meet varying workloads, enabling businesses to scale up or down based on demand.

Global reach and reliability, offering high availability and redundancy across multiple regions.

Cost efficiency by eliminating capital expenditures and reducing operational costs.

**Why Do We Need Cloud Computing?**

Cost savings: Reduces the need for upfront investments in hardware and infrastructure.

Scalability: Easily scale resources to meet changing business needs without over-provisioning.

Accessibility: Provides remote access to data and applications from anywhere with an internet connection.

Innovation: Accelerates development cycles and innovation by providing rapid deployment of resources.

Disaster recovery: Ensures data backup and recovery without the need for a secondary physical site.

**What is AWS (Amazon Web Services)?**

Definition: Amazon Web Services (AWS) is a comprehensive and widely adopted cloud platform that offers over 200 fully-featured services from data centers globally.

Market Leader: AWS is one of the most popular cloud service providers, known for its extensive service offerings and innovation in cloud technology.

Services: AWS offers services across compute, storage, databases, networking, machine learning, analytics, security, and more.

Global Infrastructure: AWS has a global network of data centers, ensuring high availability, low latency, and robust security.

Flexible Pricing: Offers various pricing models, including pay-as-you-go, Reserved Instances, and Spot Instances, allowing businesses to optimize costs.

**AWS Alternatives**

1. Microsoft Azure: A leading cloud provider offering similar services to AWS, with strong integration with Microsoft's ecosystem.
2. Google Cloud Platform (GCP): Known for its data analytics, machine learning, and Kubernetes offerings.
3. IBM Cloud: Focuses on AI, blockchain, and hybrid cloud solutions.
4. Oracle Cloud Infrastructure (OCI): Known for its enterprise-grade cloud solutions, particularly for Oracle applications.
5. Alibaba Cloud: A dominant cloud provider in Asia, offering a range of cloud services similar to AWS.
6. DigitalOcean: Popular with developers for its simplicity and cost-effectiveness, especially for small and medium-sized applications.