

CLOUD COMPUTING

Definition: Cloud computing refers to delivering computing services – like servers, storage, databases, networking, software, and more – over the internet (the cloud). Instead of owning and maintaining physical data centers and servers, users can access and use these resources on demand from a cloud provider, paying only for what they use.

Computing: Computing refers to the process of using computer systems to perform tasks or solve problems. It involves manipulation, process, storage & retrieval of data using hardware (physical device) & software (programs & application).

Types of Cloud computing:

1.Public cloud: Public cloud delivers resources, such as compute, storage, network, develop-and-deploy environments, and applications over the internet.

2.Private cloud: Private cloud are built, run, and used by a single organization, typically located on-premises.

3.Hybrid cloud: Environments that mix at least one private computing environment (traditional IT infrastructure or private cloud, including edge) with one or more public clouds are called hybrid cloud.

Cloud Services:

Cloud services are like a digital toolbox offered over the internet they fall into different categories:

1.Infrastructure as a Service (IaaS): Infrastructure as a service is a service model that delivers computer infrastructure on an outsourced basis to support various operations.

2.Platform as a Service (PaaS): Platform as a service is a category of cloud computing that provides a platform and environment to allow developers to build applications and services over the internet.

3.Software as a Service (SaaS): Software as a service is a way of delivering services and applications over the internet. Instead of installing and maintaining software, we simply access it via the internet, freeing ourselves from the complex software and hardware management.

Famous Cloud Platforms:

1.Amazon Web Services (AWS)

2.Microsoft Azure

3.Google Cloud Platform (GCP)

Features of Cloud computing:

- 1.Scalability:** Instantly adjust resources to match your needs.
- 2.Cost Efficiency:** Pay only for what you use, avoiding large upfront costs.
- 3.Accessibility:** Access services from anywhere with an internet connection.
- 4.Flexibility:** Choose and customize services to suit your requirements.
- 5.Reliability:** High availability and redundancy ensure minimal downtime.
- 6.Security:** Advanced security measures to protect your data.
- 7Automatic Updates:** Stay up-to-date with the latest features and improvements without manual intervention.