

Cloud Computing

refers to the "servers" that are accessed over the internet. (present at remote location).

In Simple terms,

It means storing, managing and accessing the data & programs on the remote servers that are hosted on internet instead of computer's hard drive.

or

cloud computing is the on-demand availability of computer system resources, especially data storage / cloud storage & computing power) without direct active management by the user.

In short,

we store, manage & process data on remote servers.

Service Providers :-

- Google cloud
- AWS (Amazon web services)
- Microsoft Azure
- IBM cloud
- Alibaba cloud , etc

CLOUD COMPUTING

Types of cloud :-

- i) Public :- accessible to all.
- ii) Private :- services accessible within any organization.
- iii) Hybrid :- public + private cloud features.
- iv) Community :- services accessible by a group of organizations.

Characteristics of cloud Computing

- a) On demand Self Service :- means that a consumer can request & receive access to a service offering, without an administrator or some sort of support staff having to fulfill the request manually.
- b) Broad network access :- i.e. the services can be accessed from any location (using any type of device). i.e., anywhere access & anytime.
- c) Resource Pooling :- resources can be storage, memory, network bandwidth, virtual machines. i.e. it can be any service which can be consumed by cloud users. resource pooling means that

multiple customers are serviced from the physical resources.

d> Measured Services :- pay according to the services you use.

e> Rapid Elasticity & Scalability :- One of the great things about cloud computing is the ability to quickly provision resources in the cloud as the organizations need them, (& then to remove them when they don't need them).

f> No Maintenance / easy maintainance :-

g> Security :- Copy of our data on various servers.
if 1 fails, data is safe on the other.

Advantages :-

i> Cost efficiency :- The biggest reason behind companies shifting to cloud computing is that it takes considerably lesser cost than any on-premise technology. Now, companies need not store data in disks anymore as the cloud offers enormous storage spaces,

Saving money and resources.

- ii> High Speed :- cloud computing lets us deploy the service quickly in fewer clicks. this quick development lets us get the resources required for our system within minutes.
- iii> Excellent accessibility :- storing information in the cloud allow us to access it anywhere and anytime regardless of the machine making it a highly accessible and flexible technology of the present times.
- iv> Back-up and restore data :- Once data is stored in the cloud, it is easier to get its back-up and recovery, which is quite a time consuming process in on-premise technology.
- v> Mobility :- employees working on-premises or from remote locations can easily access all the cloud services as long as they have an internet connection.
- vi> Collaboration :- It helps employees located in different locations to conveniently and

Securely collaboration / collaborate with each other.

Disadvantages :-

- i> Internet Connectivity :- in cloud computing, every data is stored on the cloud, and we access these data through the cloud by using the internet connection.
- ii> Vendor lock-in :- It is the biggest disadvantage of cloud computing. Organizations may face problems when transferring their services from one vendors to another. As different vendors provide different platforms, that can cause difficulty moving from one cloud to another.
- iii> Limited Control :- cloud infrastructure is completely owned, managed, and monitored by the service provider, so the cloud users have less control over the function and execution of services within a cloud infrastructure.
- iv> Security :- cloud computing service provider. while sending the data on the cloud, there may be a chance that your organization's information is hacked by hackers.