



THIRUTHANGAL NADAR COLLEGE

(Belongs to the Chennaivazh Thiruthangal Hindu Nadar Uravinmurai Dharma Fund)

Selavayal, Chennai-51.

A Self-Financing Co-educational College of Arts & Science

Affiliated to the University of Madras

Accredited with 'B' Grade by NAAC

An ISO 9001: 2015 Certified Institution

NAME OF THE DEPARTMENT: M.SC(COMPUTER SCIENCE)

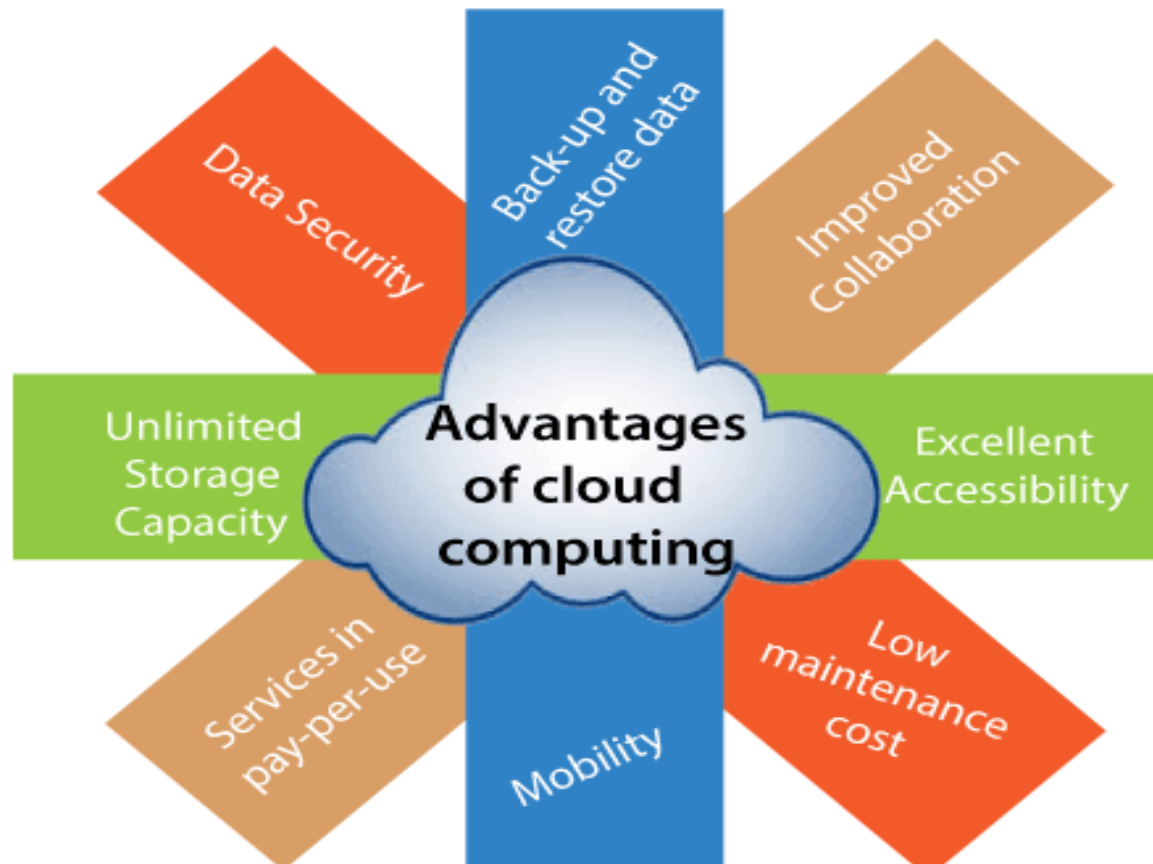
SUBJECT :CLOUD COMPUTING

**TOPIC :ADVANTAGE AND DISADVANTAGE OF CLOUD
COMPUTING ,TYPES OF CLOUD COMPUTING**

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Advantages and Disadvantages of Cloud Computing

- Advantages of Cloud Computing
- As we all know that Cloud computing is trending technology. Almost every company switched their services on the cloud to rise the company growth.
- Here, we are going to discuss some important advantages of Cloud Computing-



Advantages of cloud computing

- 1) Back-up and restore data
- Once the data is stored in the cloud, it is easier to get back-up and restore that data using the cloud.
- 2) Improved collaboration
- Cloud applications improve collaboration by allowing groups of people to quickly and easily share information in the cloud via shared storage.
- 3) Excellent accessibility
- Cloud allows us to quickly and easily access store information anywhere, anytime in the whole world, using an internet connection. An internet cloud infrastructure increases organization productivity and efficiency by ensuring that our data is always accessible.
- 4) Low maintenance cost
- Cloud computing reduces both hardware and software maintenance costs for organizations.
- 5) Mobility
- Cloud computing allows us to easily access all cloud data via mobile.

Advantage of cloud computing

- 6) IServices in the pay-per-use model
- Cloud computing offers Application Programming Interfaces (APIs) to the users for access services on the cloud and pays the charges as per the usage of service.
- 7) Unlimited storage capacity
- Cloud offers us a huge amount of storing capacity for storing our important data such as documents, images, audio, video, etc. in one place.
- 8) Data security
- Data security is one of the biggest advantages of cloud computing. Cloud offers many advanced features related to security and ensures that data is securely stored and handled.

Disadvantage of cloud computing

- A list of the disadvantage of cloud computing is given below -
- 1) Internet Connectivity
- As you know, in cloud computing, every data (image, audio, video, etc.) is stored on the cloud, and we access these data through the cloud by using the internet connection. If you do not have good internet connectivity, you cannot access these data. However, we have no any other way to access data from the cloud.
- 2) Vendor lock-in
- Vendor lock-in is the biggest disadvantage of cloud computing. Organizations may face problems when transferring their services from one vendor to another. As different vendors provide different platforms, that can cause difficulty moving from one cloud to another.
- 3) Limited Control
- As we know, 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.

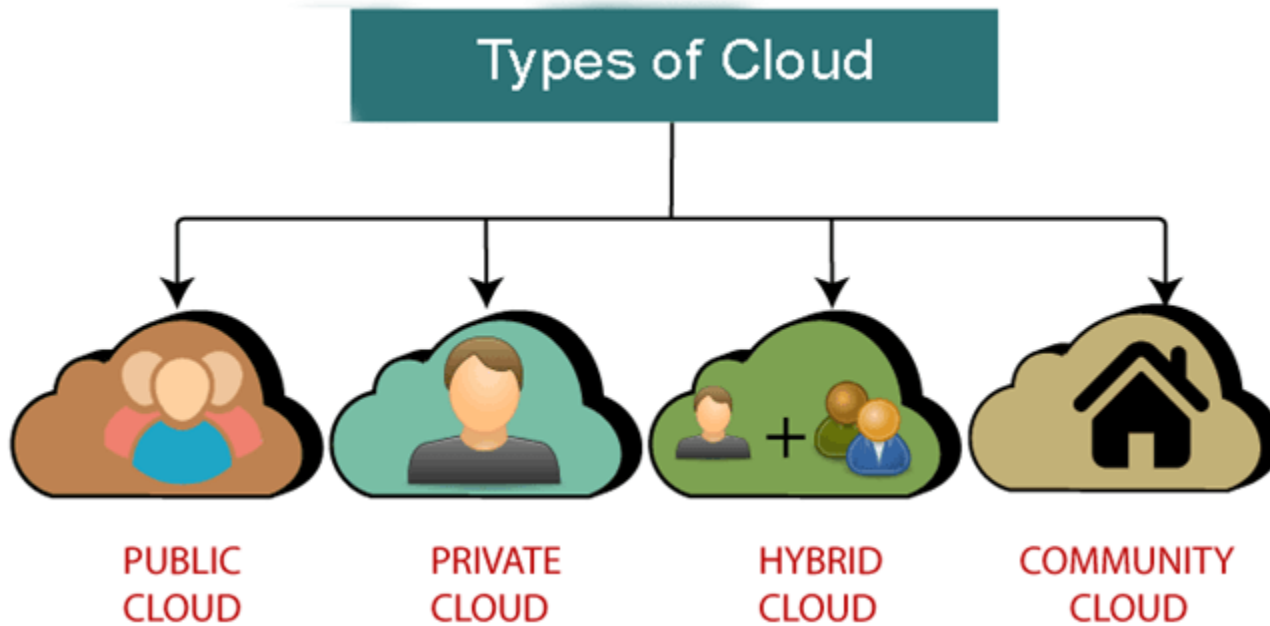
Disadvantages of cloud computing

- 4) Security
- Although cloud service providers implement the best security standards to store important information. But, before adopting cloud technology, you should be aware that you will be sending all your organization's sensitive information to a third party, i.e., a 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.

Types of cloud

- There are the following 4 types of cloud that you can deploy according to the organization's needs-

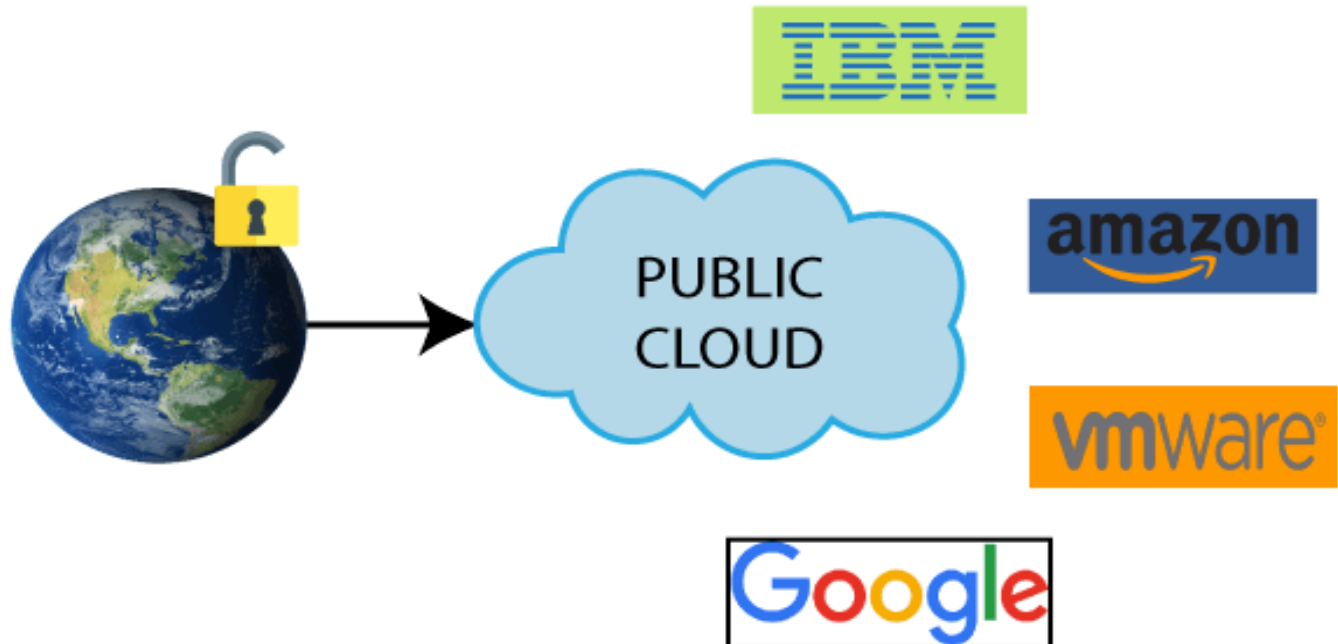
Types of cloud



Public cloud

- Public Cloud
- Public cloud is **open to all** to store and access information via the Internet using the pay-per-usage method.
- In public cloud, computing resources are managed and operated by the Cloud Service Provider (CSP).
- **Example:** Amazon elastic compute cloud (EC2), IBM SmartCloud Enterprise, Microsoft, Google App Engine, Windows Azure Services Platform.

Public cloud



Advantages of public cloud

- Advantages of Public Cloud
- There are the following advantages of Public Cloud -
- Public cloud is owned at a lower cost than the private and hybrid cloud.
- Public cloud is maintained by the cloud service provider, so do not need to worry about the maintenance.
- Public cloud is easier to integrate. Hence it offers a better flexibility approach to consumers.
- Public cloud is location independent because its services are delivered through the internet.

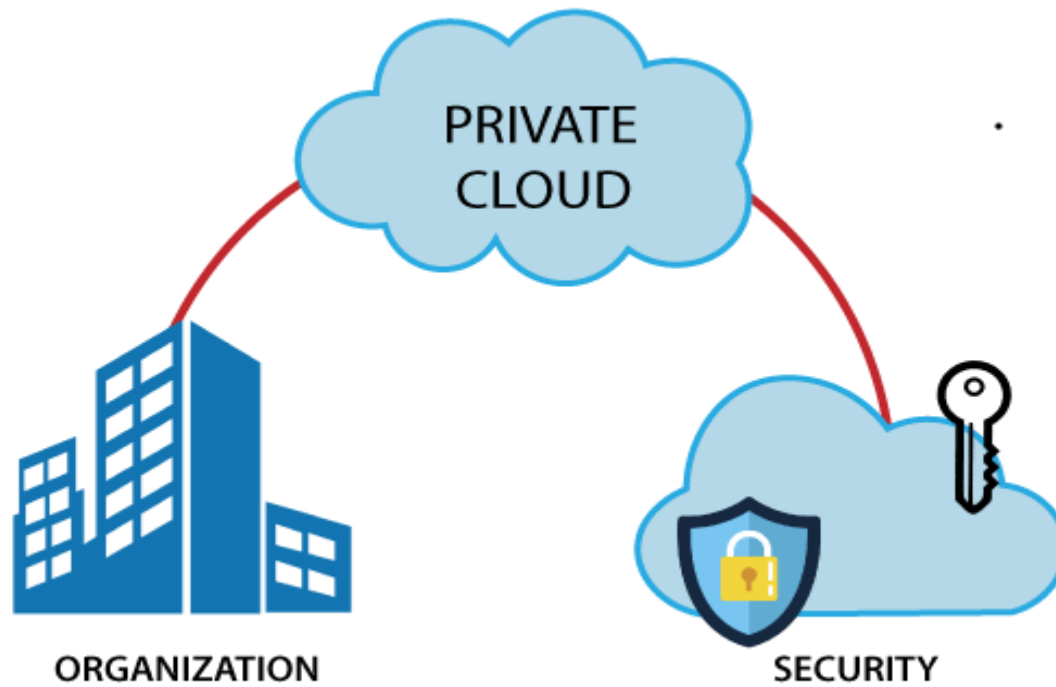
Disadvantages of public cloud

- Disadvantages of Public Cloud
- Public Cloud is less secure because resources are shared publicly.
- Performance depends upon the high-speed internet network link to the cloud provider.
- The Client has no control of data.

Private cloud

- Private Cloud
- Private cloud is also known as an **internal cloud** or **corporate cloud**. It is used by organizations to build and manage their own data centers internally or by the third party. It can be deployed using Opensource tools such as Openstack and Eucalyptus.
- Based on the location and management, National Institute of Standards and Technology (NIST) divide private cloud into the following two parts-
- On-premise private cloud
- Outsourced private cloud

Private cloud



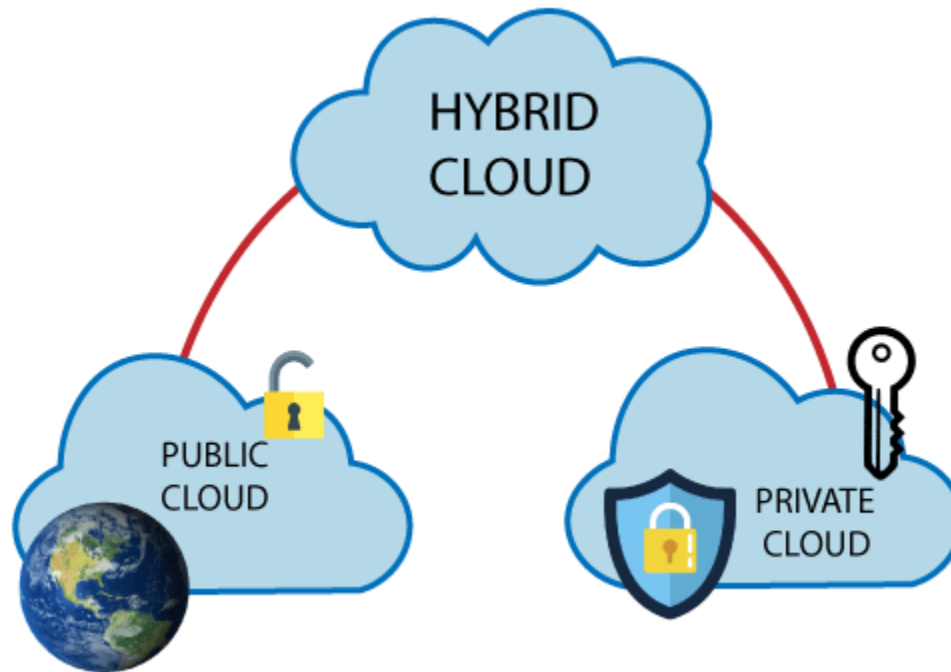
Advantages of private cloud

- Advantages of Private Cloud
- There are the following advantages of the Private Cloud -
- Private cloud provides a high level of security and privacy to the users.
- Private cloud offers better performance with improved speed and space capacity.
- It allows the IT team to quickly allocate and deliver on-demand IT resources.
- The organization has full control over the cloud because it is managed by the organization itself. So, there is no need for the organization to depend on anybody.

Hybrid cloud

- Hybrid Cloud
- Hybrid Cloud is a combination of the public cloud and the private cloud. we can say:
- ***Hybrid Cloud = Public Cloud + Private Cloud***
- Hybrid cloud is partially secure because the services which are running on the public cloud can be accessed by anyone, while the services which are running on a private cloud can be accessed only by the organization's users.
- **Example:** Google Application Suite (Gmail, Google Apps, and Google Drive), Office 365 (MS Office on the Web and One Drive), Amazon Web Services.

Hybrid cloud



Community cloud

- Community Cloud
- Community cloud allows systems and services to be accessible by a group of several organizations to share the information between the organization and a specific community. It is owned, managed, and operated by one or more organizations in the community, a third party, or a combination of them.
- **Example:** Health Care community cloud

Community cloud

