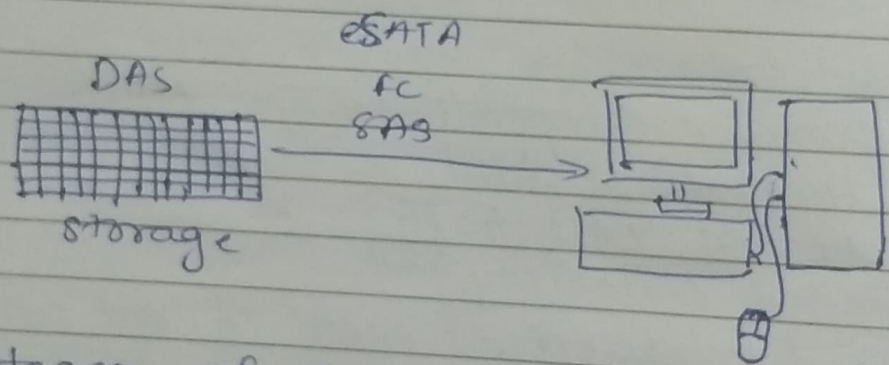


Insem exam UNIT-1

Q1 What is DAS?

→ (1) Direct attached storage or direct area storage, is often in the immediate area and is directly connected to computing device accessing it.

- (2) only one machine connects to it at a time.
- (3) It provides decent local backup storage but has limited sharing.
- (4) DAS devices include floppy disks, optical discs, CD's, DVDs, HDD, flashdrive, SSD etc.



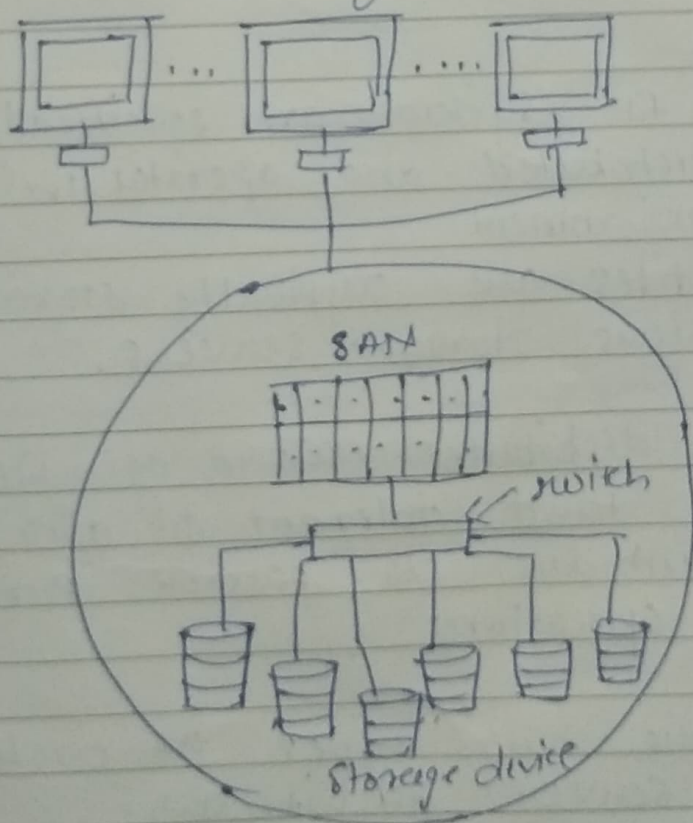
Advantages of DAS

- (1) highly available
- (2) Data security
- (3) ~~Storage~~ highly accessible.
- (4) No network setup
- (5) easy management and administration
- (6) low cost

Disadvantage

- (1) Only 1 user at a time
- (2) Data cannot be accessed by diverse group
- (3) Limited sharing
- (4) Different devices need different drivers which may not be available for some

- ② Storage Area Network
- ① It is ~~data~~ dedicated, specialized, and high speed network which provides block level data storage.
- ② It delivers the shared pool of storage devices to more than one server.
- ③ Its main aim is to transfer the data between the server & storage devices.
- ④ It is network of multiple devices of various types, including ssd & flash storage, hybrid storage, hybrid cloud,



Advantages

- 1) Security
- 2) High-Speed Data Transfer
- 3) Centralized Backup
- 4) Fast & Cheaper Backup
- 5) Easy to add or remove storage.

Disadvantages

- 1) Might be expensive for some
- 2) Doesnot work well with few servers
- 3) Data Leak may happen
- 4) complex setup.

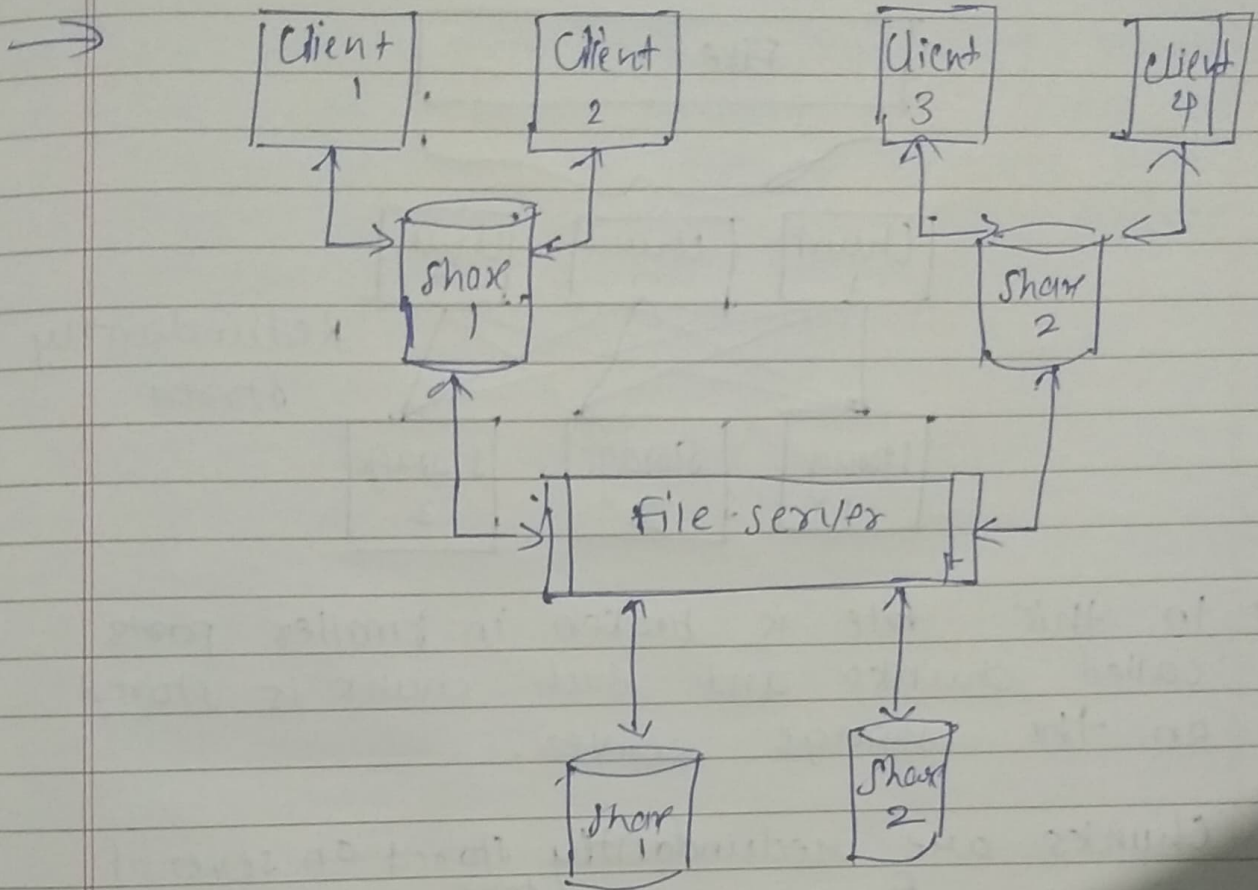
Q3 Cloud file system with architecture.

→

Defination:

- ① Cloud file system are specifically designed to be distributed and operated in cloud based environment.
- ② These files are typically stored in chunks on various storage servers.
- ③ Such a distributed nature of file system makes it fault tolerant & also high performant due to possible parallelism on file operations.
- ④ There are two types of architecture
 - ① Client server architecture
 - ② Cluster based architecture

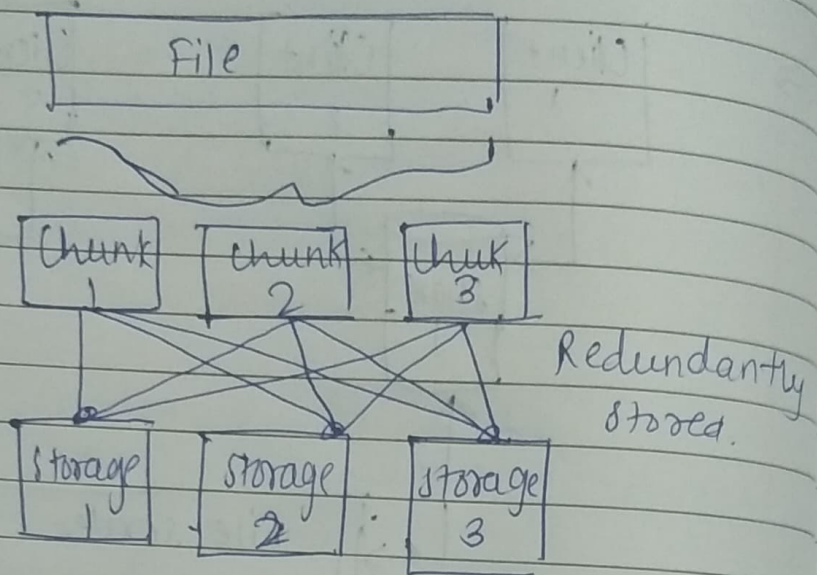
(1) Client server architecture



- 1) here the file server hosts file system that can be attached by the clients.
- 2) One file server can host multiple file shares & each file share can be mounted and operated by multiple clients.
- 3) All file operations are then combined back to file server so that other clients can have updates.
- 4) Eg NFS (network file systems)
- 5) It may be limited due to dependency on availability of file server and need to combine the file operations.

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② Cluster based Architecture



- 1) In this file is broken in smaller parts called chunks and each chunk is stored on the storage server.
- 2) Chunks are redundantly stored on several servers for any fault ^{storage} have high availability.
- 3) It does not depend upon a single server.
- 4) It is distributed & provides parallelism for ~~impro~~ scalability & performance.
- 5) It is used in the cloud environment.
- 6) Google file system, Amazon S3 are examples.

Q4 Pros & Cons & Definition of CC

In simple terms CC is range of services delivered over a network. It means using remote servers to store & access data instead of relying on local hard drives & private data centers.

Advantages

- 1) Back-up & restore
- 2) Improved collaboration
- 3) Easily accessible
- 4) Low maintenance.
- 5) mobility
- 6) pay per use
- 7) Unlimited storage
- 8) Data security

Disadvantages

- 1) Needs internet
- 2) Vendor lock in
- 3) limited flexibility
- 4) Security.
- 5) limited customization.
- 6) lower control on day to day infrastructure.