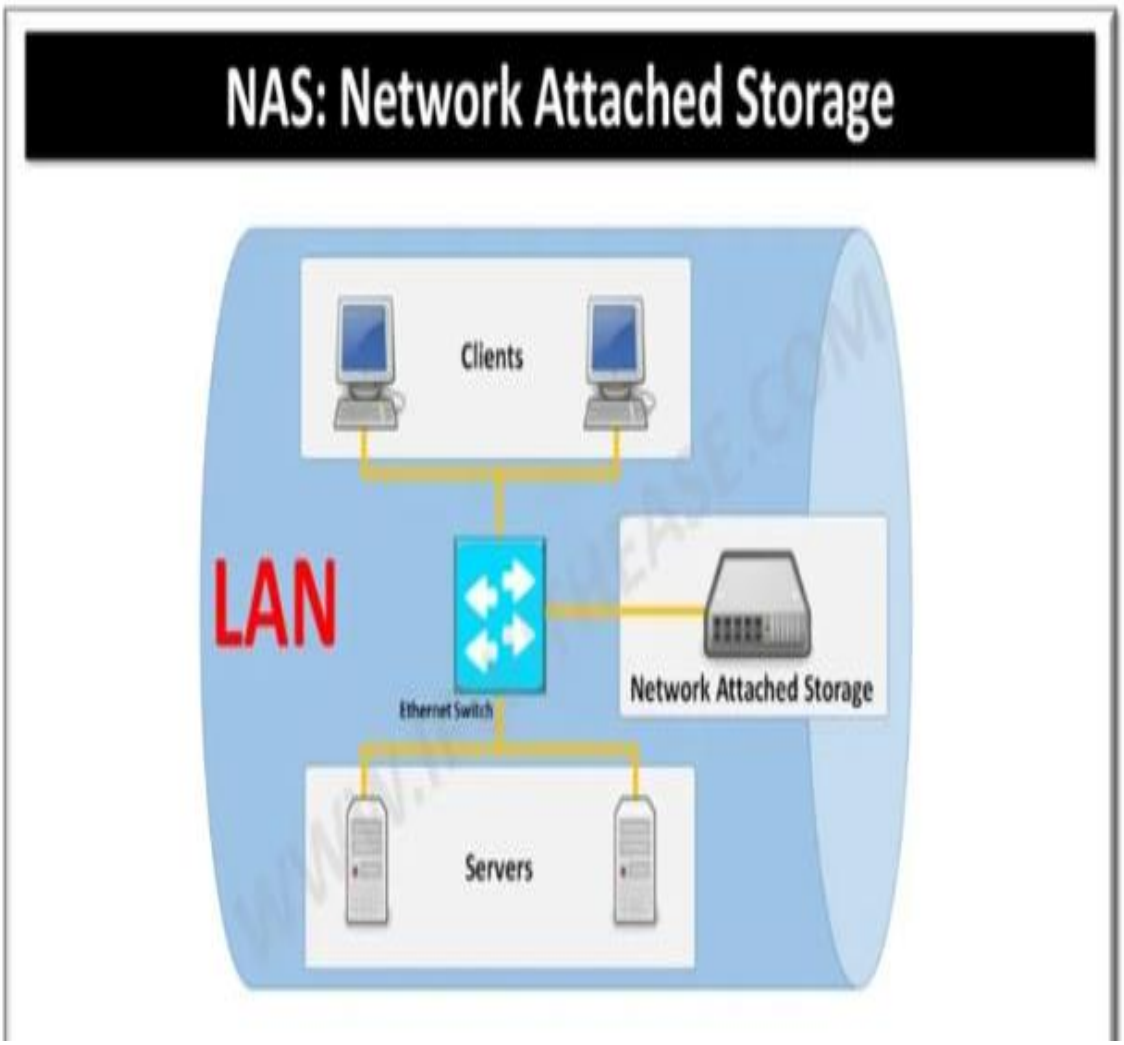
Understanding NAS-By Mukesh

Network Attached storage (NAS) is a type of dedicated file storage device that provides local-area network local area network (**LAN**) endpoints with file-based shared storage through a standard Ethernet connection.



- **NAS** is a file-level storage technology built on top of SAN or DAS technology. We can call **NAS** as a type of "file server." **NAS** devices are usually just regular servers with stripped down operating systems that are dedicated to file serving.
- **NAS** systems contain one or more hard disks, often arranged into logical, redundant storage containers or **RAID** arrays. **NAS** removes the responsibility of file serving from other servers on the network.
- **NAS** does "file-level I/O" as opposed to SAN which does "blocklevel I/O" over the network.
- With a **NAS** device, data is continually accessible, making it easy for users to meet the to customers requirements in a time and promptly. We may consider a **NAS** device is like a private cloud, data may be accessed remotely using a network connection, meaning employees can work anywhere and anytime.

NAS Protocols

NAS uses file-based protocols such as:

1. NFS (popular on UNIX systems)
2. SMB/CIFS (Server Message Block/Common Internet File System) (used with MS Windows systems),
3. AFP (used with Apple Macintosh computers)
4. NCP (used with OES and Novell NetWare).

Benefits of Network Attached Storage

- Multiple clients can share a single volume.
- Economical way to provide large storage to many clients.
- Much easier to setup and configure versus competitive technologies.
- Easier to provide RAID redundancy to mass amount of users
- Allows users permissions, privileges, restricted access to documents, etc.
- Higher utilization of storage resources.