

# STORAGE AREA NETWORK

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# INTRODUCTION

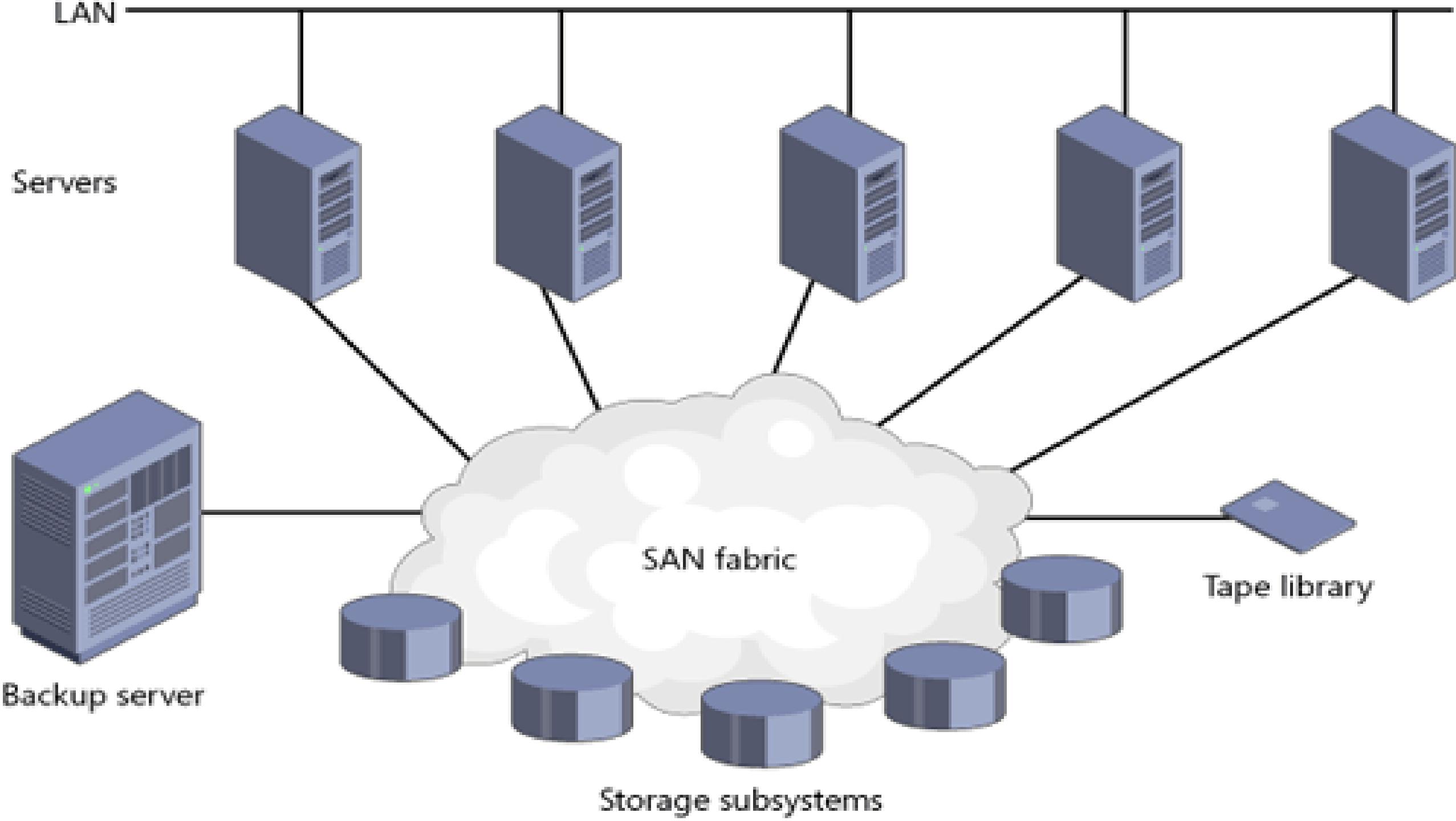
- SAN is a Network that transfer data between storage devices like disk array and servers.
- SAN work same as Server in different way.
- Data are store in Disk Array.
- SAN is useful for getting server backup

# WHY WE NEED SAN ?

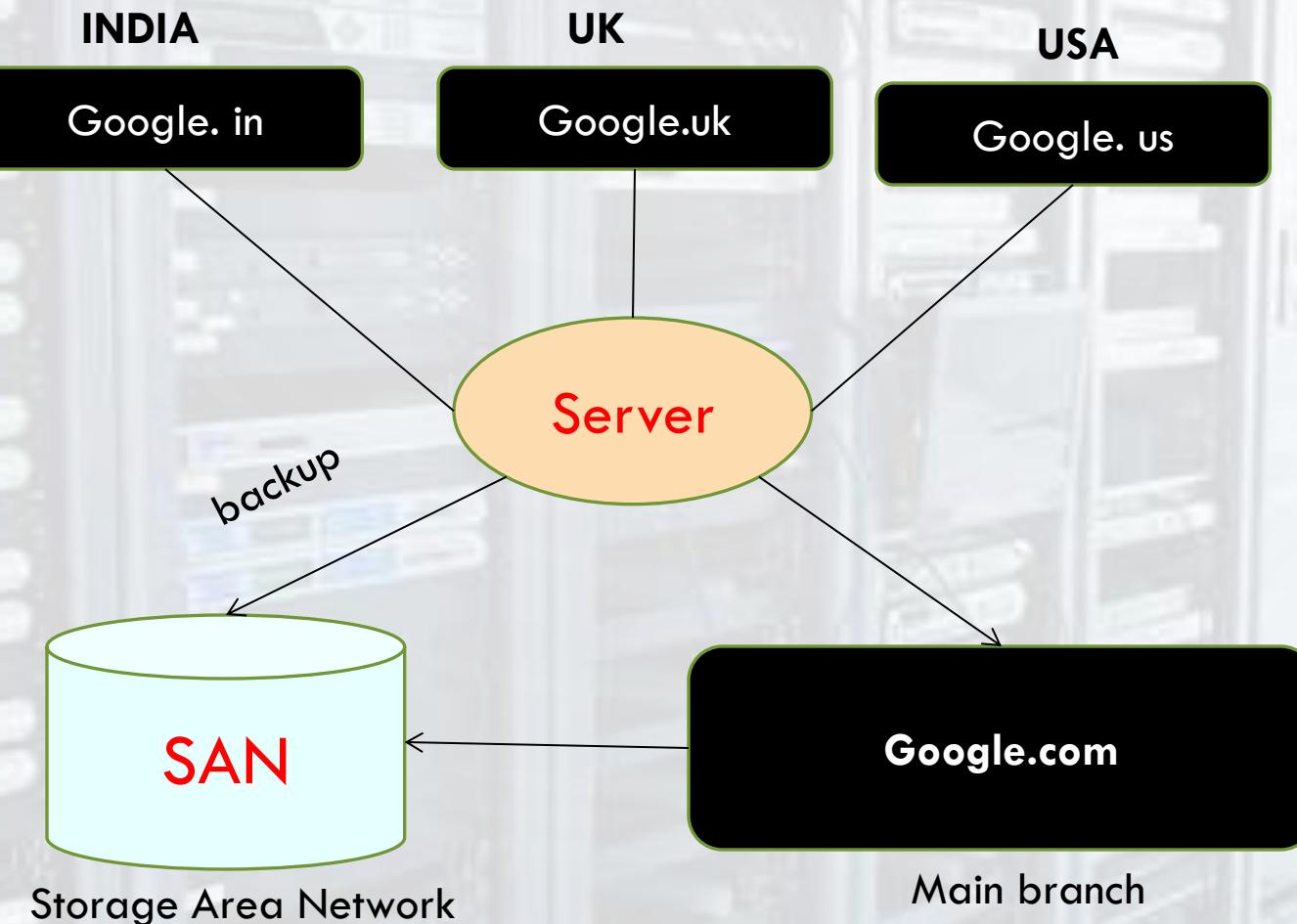
- While a single **server** can provide a shared hard drive to multiple machines, large networks may require more storage than a single server can offer.
- For example, a large business may have several **terabytes** of data that needs to be accessible by multiple machines on a local area network (**LAN**). In this situation, a SAN could be setup instead of adding additional servers. Since only hard drives need to be added instead of complete computer systems, SANs are an efficient way to increase network storage.

# DEFINITION

- A Storage Area Network (SAN) is a High-speed Special Purpose Network That interconnects Different Kinds of Data Storage Devices with Data Servers.
- Hubs, Switches and bridges are use for connecting to different devices



# EXAMPLE



# COMPONENTS OF SAN

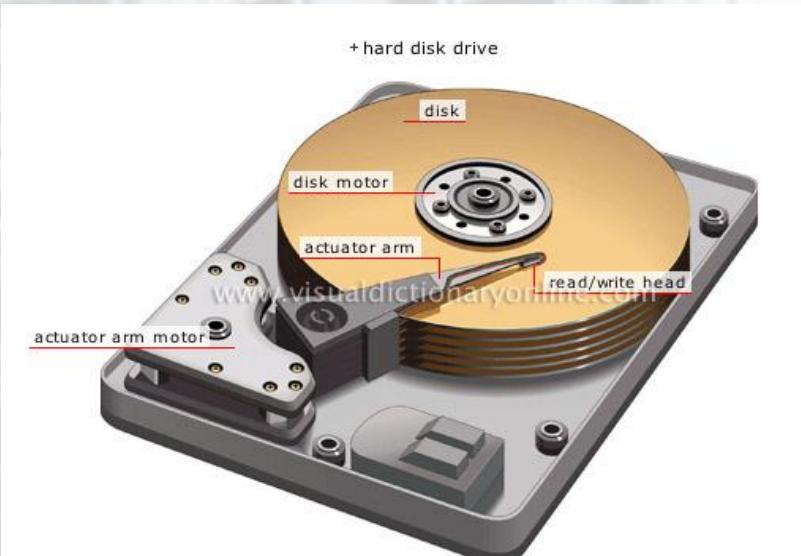
■ **Fiber Channel Switch(SAN Fabrics)** :- It is connectivity provided for servers & storage devices.

- The SAN Fabrics is made up to 2GB fiber channel switch.

■ **Hosts Bus Adapter** :- It consists of Hardware & drivers Which act as an interface with operating system

# COMPONENTS OF SAN

- **Storage Devices :-** Different types of fiber channel and disks are available depending upon the storage requirement.
- **Cabling & Cable Connectors :-** It is physical wiring between all the components of SAN machine. Co-axial & Fiber optic cables are used.



# HARDWARE & SOFTWARE REQUIREMENTS

## Hardware Requirements

- Minimum 4 G.B RAM
- Core 2 Duo Processor 2.0 GHZ
- Hard Disk Drive is Maximum For Creating Server Minimum (1 Terabyte)

# SOFTWARE REQUIREMENTS

- ESXI SERVER 4.0 (64 Bit)
- VMSPHARE CLIENT 4.0
- Microsoft Windows XP, 7 Environment

# **SAN Vendors**

**→ There are many companies which manufacture SAN machine.**

- Dell
- HP
- IBM
- Oracle
- Hitachi

# ADVANTAGES OF SAN

- Automatic Backup
- High data storage capacity
- Reduce Cost of multiple servers
- Increase Performance
- Decrease recovery problem
- Data sharing
- Improved backup and recovery
- High performance

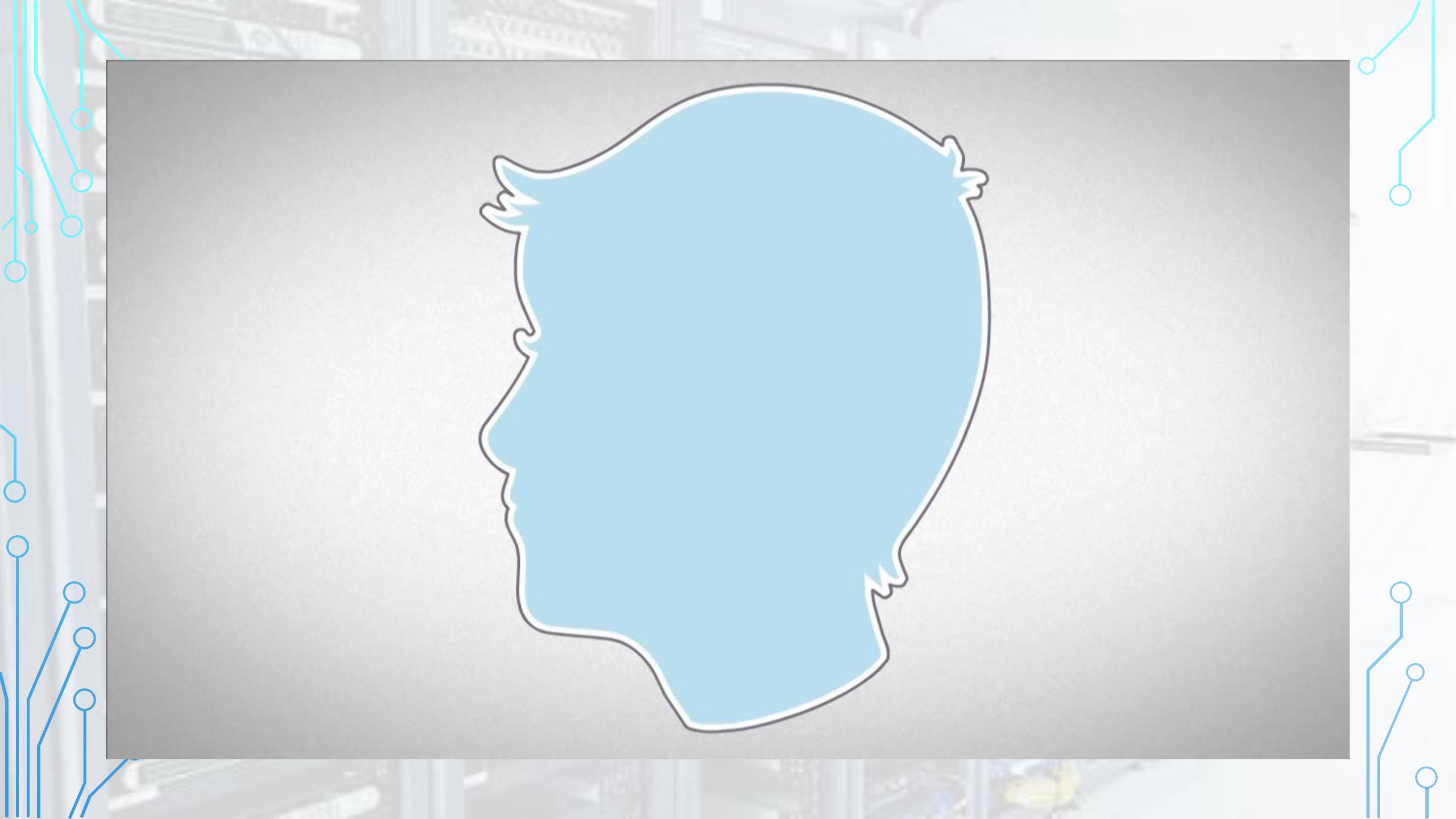
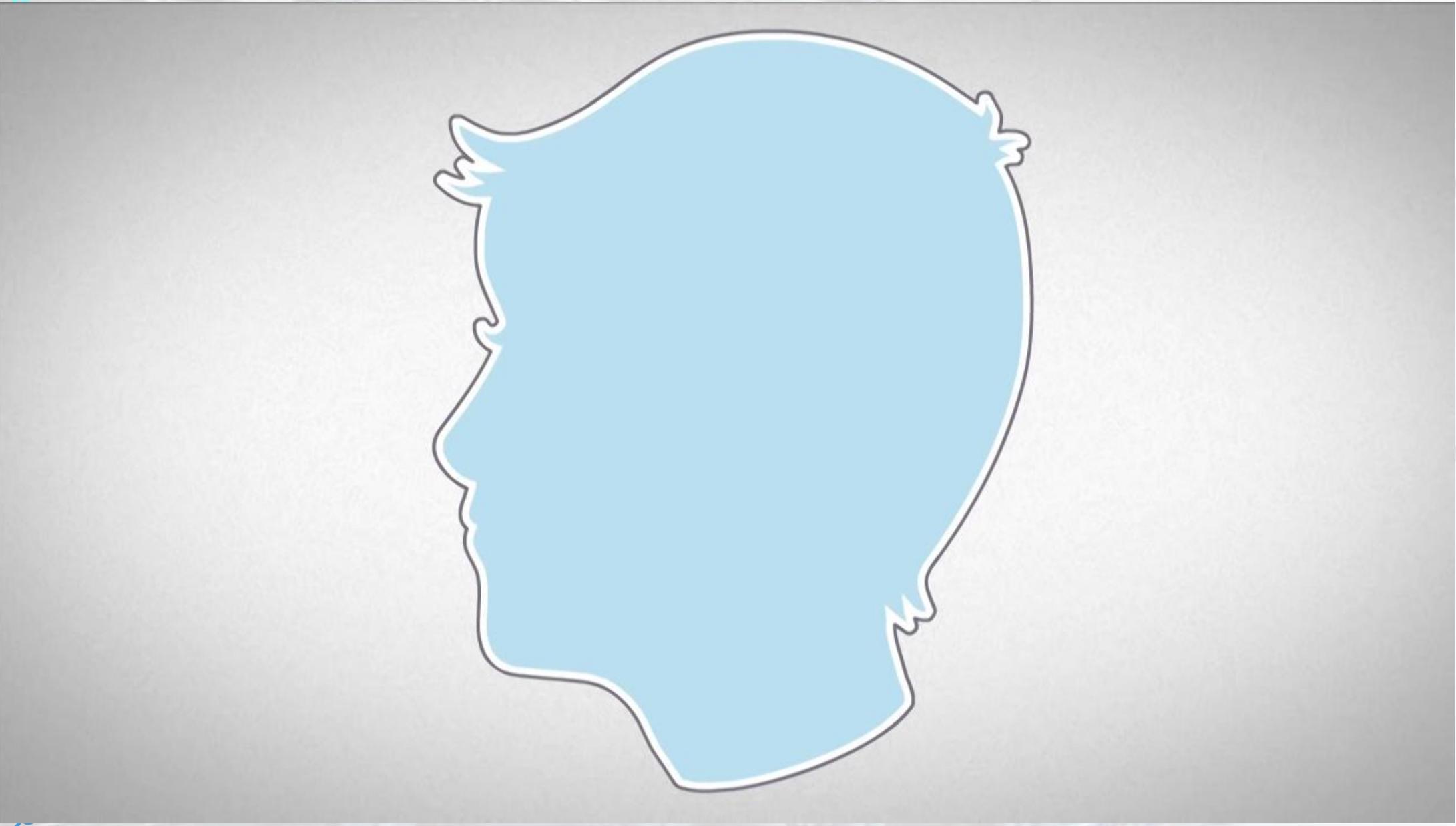
# **DISADVANTAGES OF SAN**

- It is very expensive
- Require high level technical person
- Hard to maintain
- Not affordable for small business

# REFERENCES

- <https://www-03.ibm.com/systems/za/storage/san/> Wikipedia
- <https://plus.google.com/+SanClementeSelfStorage> Google
- <https://www-03.ibm.com/systems/za/storage/san/> IBM SAN

# SOLUTIONS



thank you