Storage

Types of Storage

1. DAS : Directly Accessed Storage
2. NAS : Network Attached Storage
3. SAN : Storage Area Network

DAS

Data storage system attached with host hard drive without any network (Personal Use, Less Cost, Low Maintenance)

NAS

It is a computer data storage server connected to/with computer network and provides access to group of clients. (Good for working on small scale projects)

SAN

It is a dedicated and independent high speed network that interconnects and delivers a shared pool of storage device to multiple servers. (Mainly used for large projects, costly and high maintenance)

Worst Case Scenario in SAN

Budget is low, requirement is low, but still SAN is acquired/bought. If the staff was less in number, and budget was also low, then a SAN was not necessary.

Best Case Scenario in SAN

Project was large scale and mission critical, and a large organization was involved, then acquiring a SAN was necessary.

Some advantages of SAN

1. Storage exists independent of application
2. Better availability, reliability and serviceability
3. Better application performance
4. Centralized and Consolidated
5. Remote site data transfer and vaulting: Remote copy of data protects from disasters
6. Simple centralized management: Simplify management by creating single image

VSAN (Virtual Storage Area Network)

It is a storage based component that provides a virtualized pool. Communication is done via iSCSI or fibre channel.

Distributed Computing

Distributed Systems

It is a collection of independent entities that cooperate to solve a problem that cannot be individually solved. Distributed computing can be defined as a collection of multiple or autonomous computer systems linked by a computer network and being equipped by distributed systems.

Characteristics of Distributed Computing

1. Heterogeniety is hidden by the user
2. Internal systems are not shared (like RAM)
3. Availability must be present inspite of failure
4. Information Sharing
5. No common physical clock
6. No shared memory
7. Geographical Separation
8. Processors are loosely coupled (please google what is the meaning of loosely coupled)

Intranet

It is a small part of internet being used by one organization separately administered.

Parallel Computing

It is the use of multiple processing elements simultaneously for solving any problem. It saves time and money. Serial computing wastes computer potential, thus parallel computing makes better use of hardware. It can take advantage of non-local resources when resources are finite. In it many executions/calculations of a program take place parallely.