NETWORK OPERATING SYSTEMS

Definition

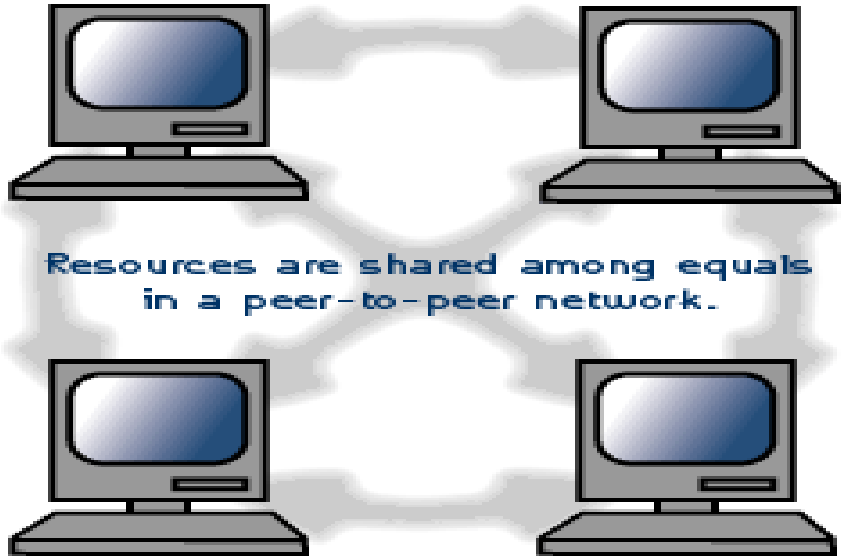
- **Network operating system** (NOS)refers to software that implements an **operating system** of some kind that is oriented to computer **networking**. For example, one that runs on a server and enables the server to manage data, users, groups, security, applications, and other **networking** functions.
- It can also be defined as an ***operating system*** that includes special functions for connecting computers and devices into a local-area *network* (LAN).

NOS Types

- There are two main types of NOS
  - Peer to peer
  - Client server

Peer to Peer - NOS

- In this system all computers are equal and can share resources. They lack centralized management.



Advantages/ Disadvantages of Peer to Peer

Advantages :

- Cheap: Does not need dedicated server hardware or software

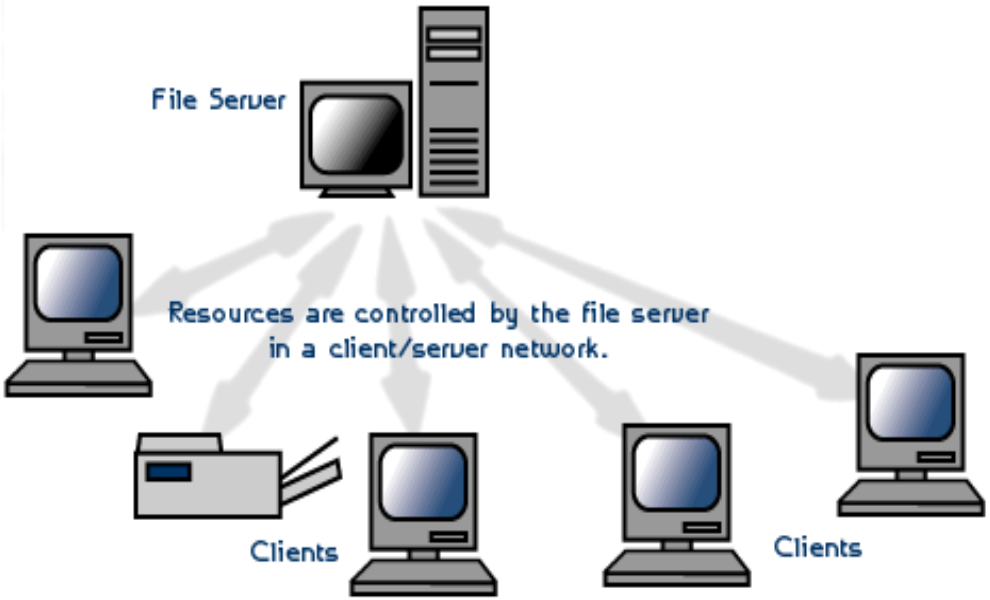
Disadvantages:

- Difficult to manage: the decentralized nature of the set up makes it harder to manage.

- Poor Security: There is less security in this set up

Client Server - NOS

- Software that allows the network to centralize network resources in dedicated servers



Advantages/ Disadvantages of Client server

- **Advantages:**
- Easier management due to its centralized nature
- Scalability - Any or all elements can be replaced individually as needs increase.
- Flexibility - New technology can be easily integrated into system

Advantages/ Disadvantages of Client server

Disadvantages :

- Expensive – Prices for server software and hardware is high
- Maintenance – Need for dedicated staff to manage the network
- High Failure impact: In case of failure of the server too many users will be affected.

Examples of services that can be centralized

- User management
- File management
- Web services

Examples of NOS

- Unix /Linux
- Windows client software e.g Windows XP, Windows 7, Windows 8, Windows 10 etc.
- Windows server software e.g Windows server 2003,2008, 8 etc.

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