

LESSON NOTES 13

Year/Level: 12 Subjects: Computer Studies

Strand:	CE 1	Computer and Applications
Sub-strand:		CE 12.1.5 Communications and Networks
Content Learning Outcome:		❖ Network strategies

Lesson Notes

Network Strategies

A network strategy describes how resources and information are coordinated and shared

Terminal server network

- ❖ Processing power is centralized in one large computer (server), which can handle large number of connections.
- ❖ All nodes connected to this server are either terminals with no or little processing power or microcomputers running special terminal emulation such as Windows Remote Desktop.
- ❖ For example, most airline reservation systems are terminal server networks.

Advantage

- Is the centralized location and the control of technical personnel, software and data.

Disadvantage

- Is the lack of control and flexibility for the end user
- Terminal systems do not use the processing power available with microcomputers

Client/server network

- ❖ The host computer usually the server coordinates resources to other computers (clients) connected to it
- ❖ The software running on the client requests for information and services from the server which then responds to individual clients.
- ❖ In a network, the client/server model provides a convenient way to interconnect programs that are distributed efficiently across different locations.
- ❖ Computer transactions using the client/server model are very common. For example, to check your bank account from your computer, a client program in your computer forwards your request to a server program at the bank. That program may in turn forward the request to its own client program that sends a request to a database server at another bank computer and to retrieve your account balance. The balance is returned to the bank data client, which in turn serves it back to the client in your personal computer, which displays the information for you.

Advantages

- Client/server network has the ability to handle very large networks efficiently
- Powerful network management software that monitors and controls the network's activities.

Disadvantages

- Are the cost of installation and maintenance

Peer-to-peer network (P2P)

- ❖ Nodes have equal processing capabilities and can act as both the client and a server.
- ❖ It is a type of transient internet network that allows a group of computer users with the same networking program to connect with each other and directly access files from one another's hard drives.

Advantages

- are inexpensive and easy to install
- usually work well for smaller systems with fewer than 100 nodes

Disadvantages

- As the number of nodes increases, the performance of the network declines

Distributed processing networks

- ❖ Processing capability is shared across multiple nodes usually servers dispersed at different locations
- ❖ This strategy is common for very large organizations like banking industries
- ❖ For example, ANZ bank has its main server in Melbourne Australia, but for Fiji customers, ANZ house has its own server that does the processing for its Fiji customers. The account details are then replicated to the main headquarters servers in Melbourne.

Advantage

- Is improved sharing, improved availability-users at one site can access data stored at other sites.
- Data can be placed at the site close to the users who normally use that data.

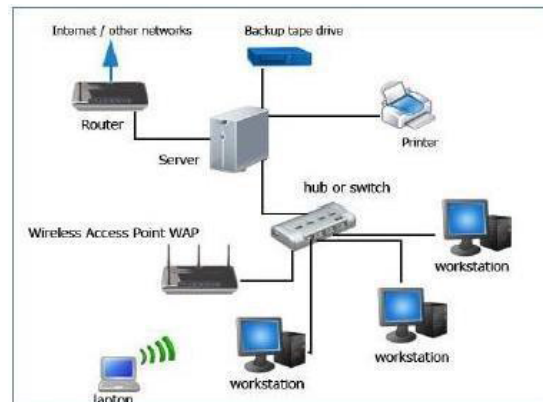
Disadvantages

- Which include increased complexity, cost, and security issues
- Data integrity can be difficult

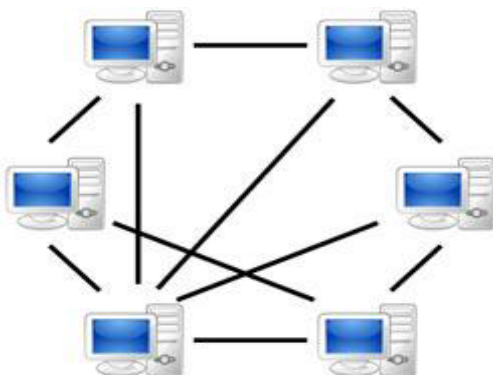
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