

NIELIT Gorakhpur

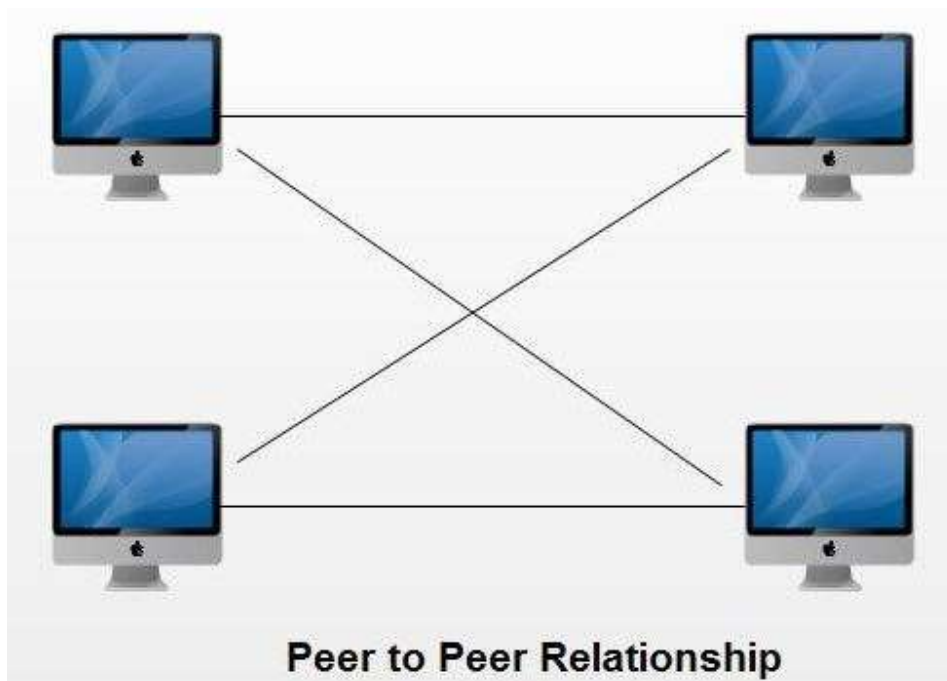
Course Name: O Level (2nd Sem)
Topic: Peer to Peer computer network

Subject: ICT
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Chapter 3rd [Networking Concepts]

Peer to Peer computer network

- In the peer to peer computer network model we simply use the same Workgroup for all the computers and a unique name for each computer in a computer network.
- There is no master or controller or central server in this computer network and computers join hands to share files, printers and Internet access.
- It is practical for workgroups of a dozen or less computers making it common environments, where each PC acts as an independent workstation and maintaining its own security that stores data on its own disk but which can share it with all other PCs on the network.
- Software for peer-to-peer network is included with most modern desktop operating systems such as Windows and Mac OS.
- Peer to peer relationship is suitable for small networks having less than 10 computers on a single LAN.
- In a peer to peer network each computer can not act as both a server and a client.



Advantages of Peer to Peer Networks

Peer to peer networks have following advantages:

- Such networks are easy to set up and maintain as each computer manages itself.
- It eliminates extra cost required in setting up the server.
- Since each device is master of its own, they are not dependent on other computers for their operations.

Disadvantages of Peer to Peer Networks

- In peer-to-peer network, the absence of centralized server makes it difficult to backup data as data is located on different workstations.
- Security is weak as each system manages itself only.
- There is no central point of data storage for file archiving.

Difference Between Client-server And Peer-To-Peer

BASIS OF COMPARISON	CLIENT-SERVER NETWORK	PEER-TO-PEER NETWORK
Focus	Focuses on information sharing.	Focuses on connectivity.
Data	Centralized server is used to store the data.	Each peer has its own data.
Implementation	Less expensive to implement.	It is less expensive to implement.
Differentiation	Clients and server are differentiated, specific server and clients are present.	Clients and server are not differentiated.
Stability	Client-Server Network is more stable and scalable.	Peer-to-Peer Network are less stable if number of peer is increased.
Service	The client requests for service and server responds with a service	Each and every node can make both request and respond for the services.
Security	It is very much secure when compared the Peer-to-Peer Network. This is because the server can authenticate a	It is less secure when compared to Client-server Network and in fact it becomes more

	client's access to any part of the network.	problematic as the number of clients increases.
Performance	The Client-server arrangement does not experience performance problems in case the number of client increases. This is because the server does a lot of the heavy lifting and that the clients are not required to share their computing power.	In case of large number of clients in a Peer-to-Peer Network, performance problems are highly likely to be experienced since all resources are shared.
Reliability	It is less reliable.	It is more reliable.
Access Time For Service	Multiple clients request for services from a server and therefore, the access time for a service is higher.	The service providing nodes are distributed, the service requesting node does need to wait long.

Assignment:-

- 1-Write down advantages of Peer to Peer computer Networks.
- 2- Write down Difference Between Client-server And Peer-To-Peer computer network