

Advantages of Ring Topology

- i) All data flow in one direction reducing the chance of packet collisions.
- ii) Every computer is given equal access to the token, no one computer can monopolise the network.
- iii) Data can be transferred between workstations at high speed.

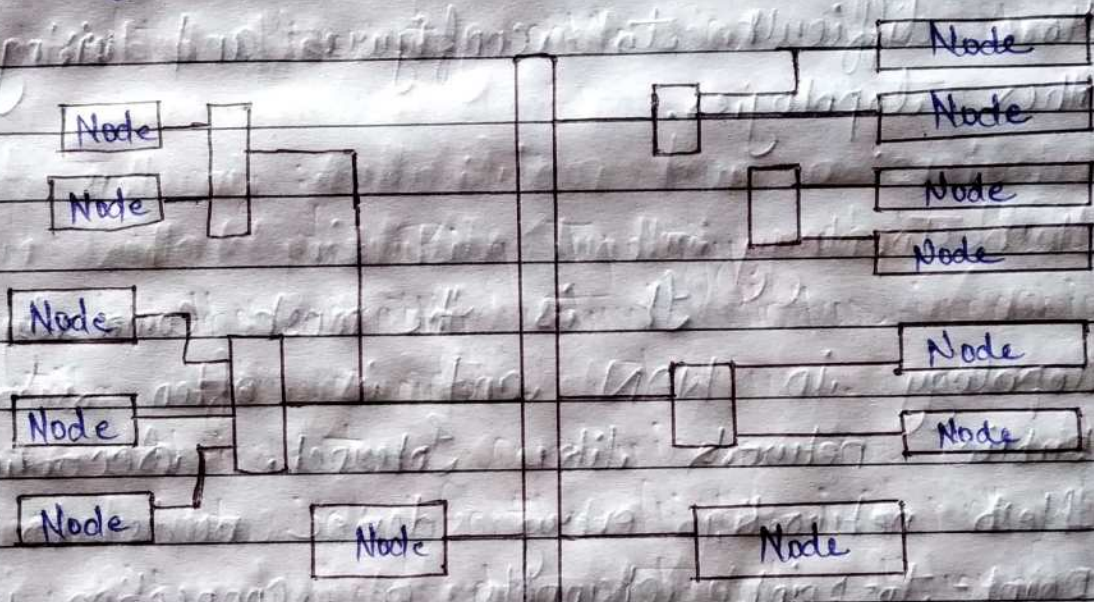
Disadvantages of Ring Topology

- i) Failure of one computer in the ring can effect the whole network.
- ii) It is difficult to troubleshoot in a ring network.
- iii) Adding or Removing computers disturb the network.

iv) Tree Topology :-

This is a network topology containing zero or more nodes that are linked together in a hierarchical fashion. The topmost node is called Root. The root may have 0 or more child nodes connected by Edge, the root is the parent node to its children. Each child node can in turn

have 0 or more children of its own. Nodes sharing the same parents are called Siblings. Every node in a tree has exactly one parent node and all the nodes in the tree are descendants of the root node. These relationships ensure that there is one and only one path from one node to any other node in tree.



Backbone

Advantages of Tree Topology :-

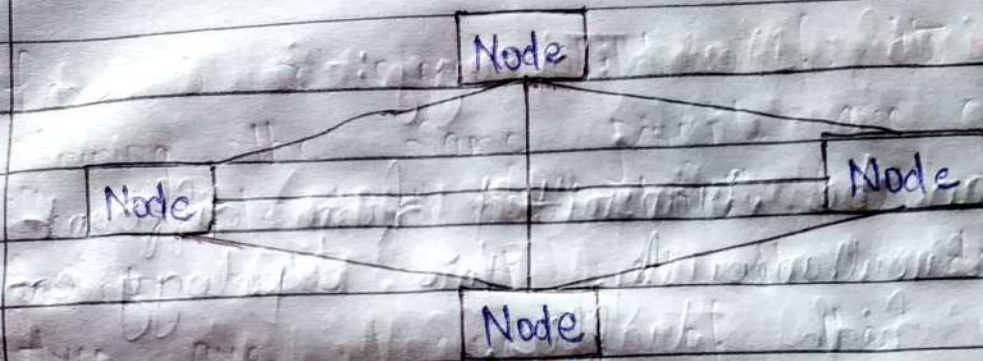
- i) Point-to-Point wiring for individual segments.
- ii) The distance to which a signal can travel increases the signal passes through a chain of hubs.
- iii) Supported by several hardware & software vendors.

Disadvantages of Tree Topology :-

- i) Overall length of segment is limited by the type of the cabling used.
- ii) If the backbone line breaks, the entire segments goes down.
- iii) More difficult to configure and wiring than other topologies.

Mesh Topology :-

It is the most commonly used topology in WAN and is often seen in public network like Internet. According to Mesh network, every device needs to have point-to-point channels or connection with the every other device on the network. This network is used in hybrid approach with the every other device on the network. This network is used in hybrid approach with the only most important devices interconnected in the mesh. This is so because it is impractical to do so in normal condition, we can say that peer-to-peer networking.



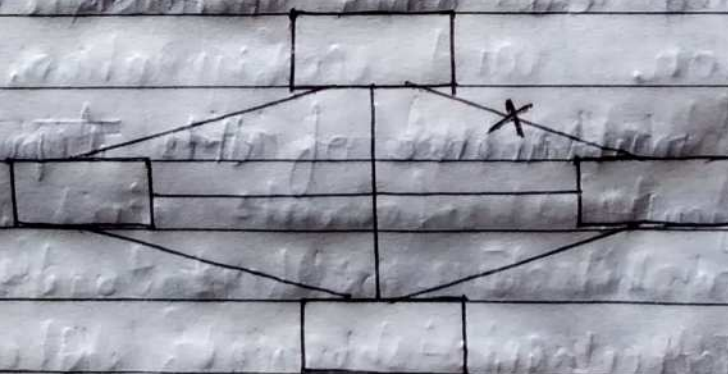
Types of Mesh Topology :-

i) Full Mesh Topology :-

It is used only for backbone network. Its main advantage is that the network traffic can be redirected to other nodes if one of the nodes go down.

ii) Partial Mesh Topology :-

In partial mesh topology, the workstations are indirectly connected to other devices. This one is less costly, and also reduces less redundancy.



Advantage of Mesh Topology :-

- i) Data can be transmitted from different devices simultaneously. This topology can withstand high traffic.
- ii) Even if one of the components fail, there is always an alternative present so data can transfer doesn't get affected.
- iii) Extension and modification in this topology can be done without disturbing other nodes.

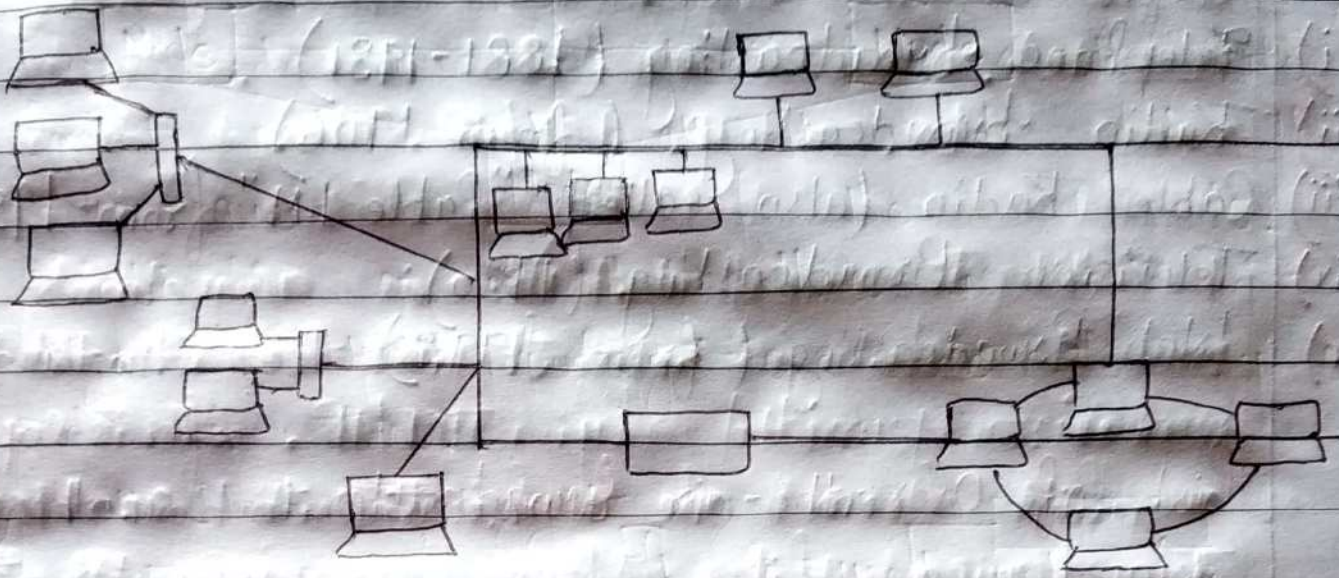
Disadvantage of Mesh Topology :-

- i) There are high chances of redundancy in many of network connections.
- ii) Overall cost of this network is too high as compared to other network topologies.
- iii) Setup and maintenance of this topology is very difficult.

Hybrid Technology :-

A hybrid technology is a type of network topology that uses two or more other network topologies including bus topology, mesh topology, ring topology.

and tree topology.



Broadcasting Network Channel :-

Broadcast network has a single communication channel or medium that is shared by all the machine on the network. Broadcast is the distribution of audio & video content to dispersed audience via any audio or visual mass communication medium but usually are using electromagnetic radiation that means radio waves. The receiving parties may include the general public, or a relatively large subset thereof. Broadcasting has been used for purpose of private, recreation, non-commercial, exchange of messages, experimentation, self-training and emergency communication. Such as radio and television.