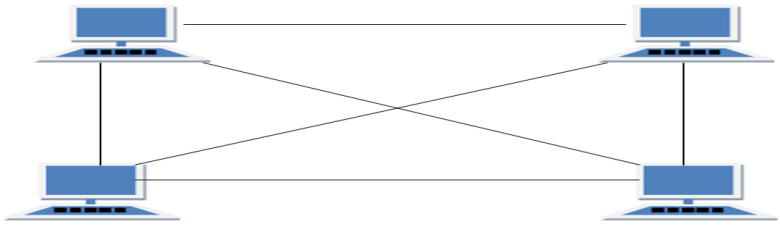
Course Name : O Level(B3-Ist sem.) Subject : ITT&NB
Topic : Network Topology part-3 Date : 14-05-20

MESH Topology

In mesh topology each and every nodes or devices are connected to each other. It is also called a point-to-point connection. In this topology each device is connected to every other device on the network through a dedicated point-to-point link.



Types of Mesh Topology

There are two types of mesh topology

1. **Partial Mesh Topology:** In this type of topology some nodes are connected in the mesh topology form but some nodes are only connected to two or three nodes.
2. **Full Mesh Topology:** Each and every node is connected to each other.

Features of Mesh Topology

1. Fully connected.
2. Robust.
3. Not flexible.

Advantages of Mesh Topology

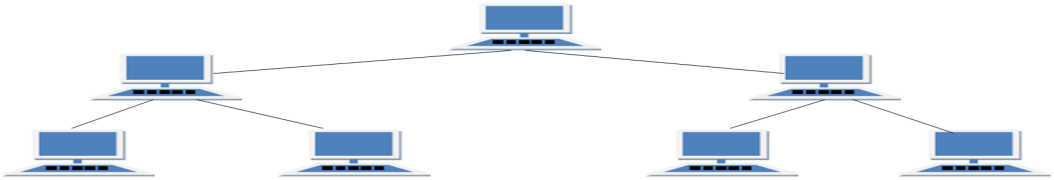
1. Each connection can carry its own data load.
2. It is robust.
3. Fault is diagnosed easily.
4. Provides security and privacy.

Disadvantages of Mesh Topology

1. Installation and configuration is difficult.
2. Cabling cost is more.
3. Bulk wiring is required.

TREE Topology

- It is also called hierarchical topology. It should at least have three levels to the hierarchy.
- It has a root node and all other nodes are connected to it forming a hierarchy.



Features of Tree Topology

1. Ideal if workstations are located in groups.
2. Used in Wide Area Network.

Advantages of Tree Topology

1. Extension of bus and star topologies.
2. Expansion of nodes is possible and easy.
3. Easily managed and maintained.
4. Error detection is easily done.

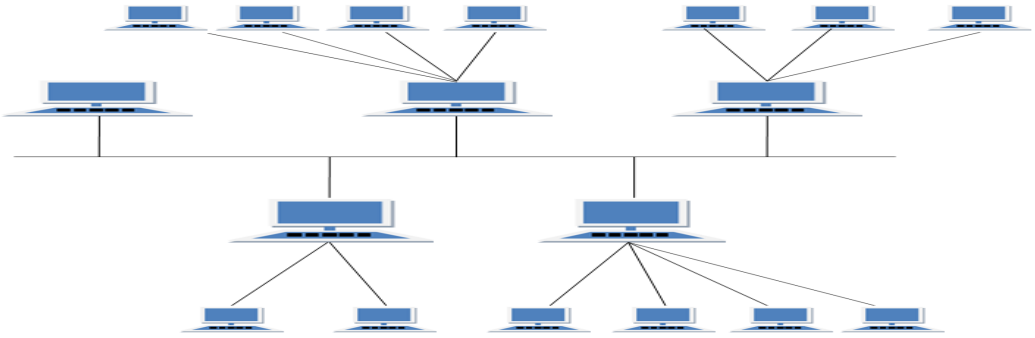
Disadvantages of Tree Topology

1. Heavily cabled.
2. Costly.
3. If more nodes are added maintenance is difficult.
4. Central hub fails, network fails.

HYBRID Topology

- It is two different types of topologies which is a mixture of two or more topologies.
  Example :

If in an office in one department ring topology is used and in another star topology is used, connecting these topologies will result in Hybrid Topology (ring topology and star topology).



Features of Hybrid Topology

1. It is a combination of two or topologies
2. Inherits the advantages and disadvantages of the topologies included

Advantages of Hybrid Topology

1. Reliable as Error detecting and trouble shooting is easy.
2. Effective.
3. Scalable as size can be increased easily.
4. Flexible.

Disadvantages of Hybrid Topology

1. Complex in design.
2. Costly.

Exercise:

1. Define Mesh, Tree and Hybrid topology.