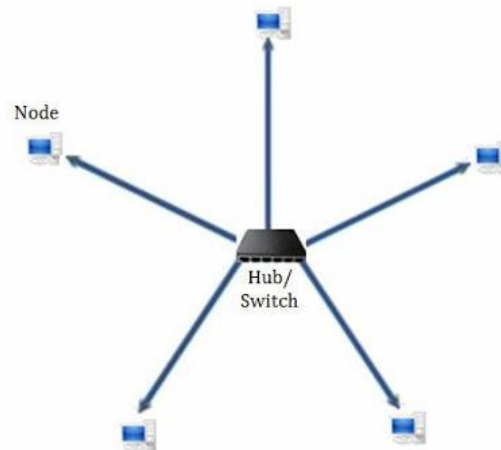


STAR TOPOLOGY: ADVANTAGES AND DISADVANTAGES

What is Star topology?

In Star topology, all the components of network are connected to the central device called “hub” which may be a hub, a router or a switch. Unlike Bus topology (discussed earlier), where nodes were connected to central cable, here all the workstations are connected to central device with a point-to-point connection. So it can be said that every computer is indirectly connected to every other node by the help of “hub”.

All the data on the star topology passes through the central device before reaching the intended destination. Hub acts as a junction to connect different nodes present in Star Network, and at the same time it manages and controls whole of the network. Depending on which central device is used, “hub” can act as repeater or signal booster. Central device can also communicate with other hubs of different network. Unshielded Twisted Pair (UTP) Ethernet cable is used to connect workstations to central node.



Star Topology Diagram

Advantages of Star Topology

- 1) As compared to Bus topology it gives far much better performance, signals don't necessarily get transmitted to all the workstations. A sent signal reaches the intended destination after passing through no more than 3-4 devices and 2-3 links. Performance of the network is dependent on the capacity of central hub.
- 2) Easy to connect new nodes or devices. In star topology new nodes can be added easily without affecting rest of the network. Similarly components can also be removed easily.
- 3) Centralized management. It helps in monitoring the network.
- 4) Failure of one node or link doesn't affect the rest of network. At the same time its easy to detect the failure and troubleshoot it.

Disadvantages of Star Topology

- 1) Too much dependency on central device has its own drawbacks. If it fails whole network goes down.
- 2) The use of hub, a router or a switch as central device increases the overall cost of the network.
- 3) Performance and as well number of nodes which can be added in such topology is depended on capacity of central device.

Source: <http://www.ianswer4u.com/2011/05/star-topology-advantages-and.html#axzz3Qs5RV0Sb>