

# TREE TOPOLOGY: ADVANTAGES AND DISADVANTAGES

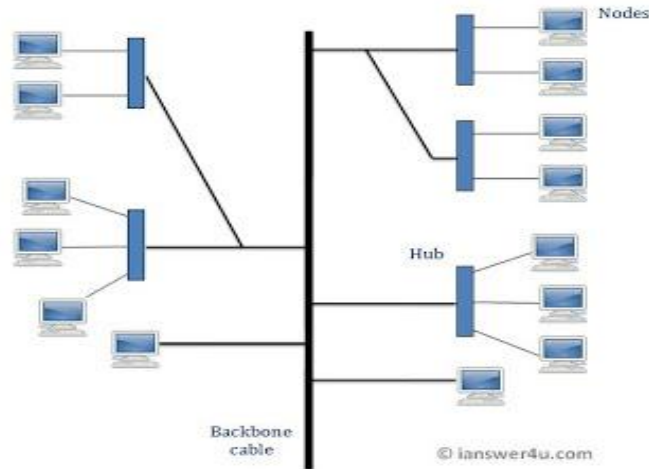
## What is Tree Topology?

Tree Topology integrates the characteristics of Star and Bus Topology. Earlier we saw how in Physical Star network Topology, computers (nodes) are connected by each other through central hub. And we also saw in Bus Topology, work station devices are connected by the common cable called Bus.

After understanding these two network configurations, we can understand tree topology better.

In Tree Topology, the number of Star networks is connected using Bus. This main cable seems like a main stem of a tree, and other star networks as the branches. It is also called **Expanded Star Topology**.

Ethernet protocol is commonly used in this type of topology. The diagram below will make it clear.



Tree Topology

Let's discuss the advantages and disadvantages of Tree Topology now.

### **Advantages of Tree Topology**

1. It is an extension of Star and bus Topologies, so in networks where these topologies can't be implemented individually for reasons related to scalability, tree topology is the best alternative.
2. Expansion of Network is possible and easy.
3. Here, we divide the whole network into segments (star networks), which can be easily managed and maintained.
4. Error detection and correction is easy.
5. Each segment is provided with dedicated point-to-point wiring to the central hub.
6. If one segment is damaged, other segments are not affected.

## **Disadvantages of Tree Topology**

- 1.** Because of its basic structure, tree topology, relies heavily on the main bus cable, if it breaks whole network is crippled.
- 2.** As more and more nodes and segments are added, the maintenance becomes difficult.
- 3.** Scalability of the network depends on the type of cable used.

Source: <http://www.ianswer4u.com/2012/01/tree-topology-advantages-and.html#axzz3Qs5RV0Sb>