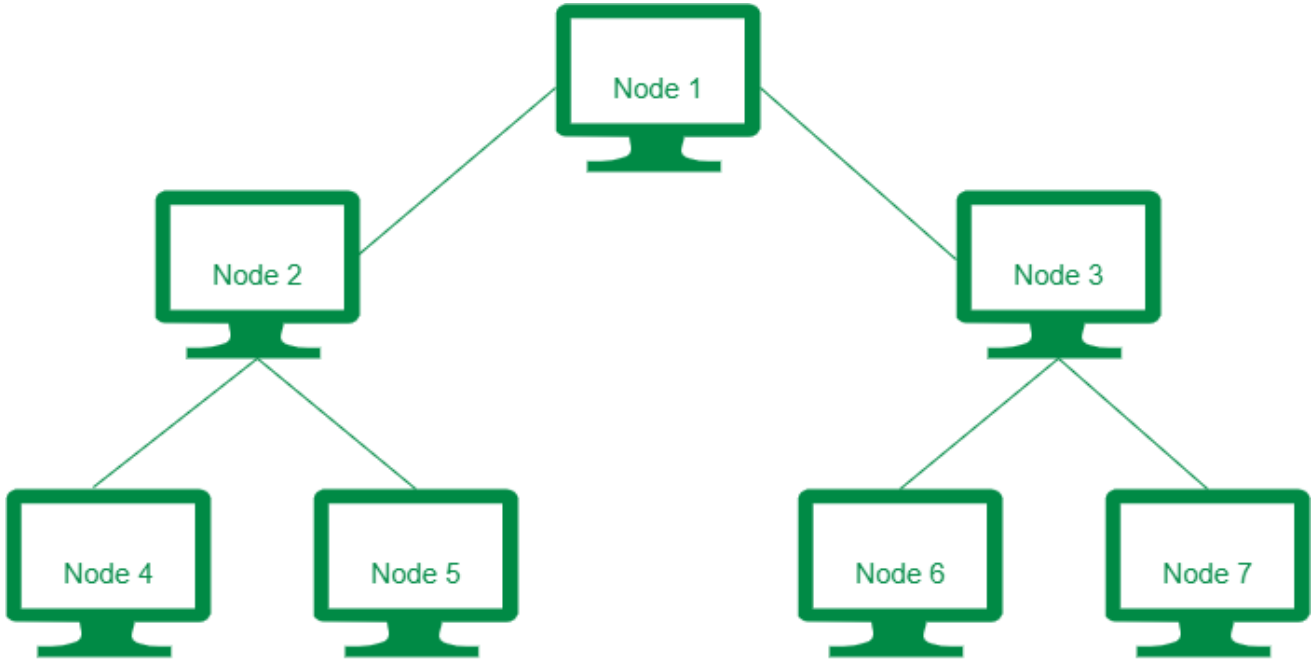
Tree topology



Tree Topology

A tree topology is a special type of structure where many connected elements are arranged like the branches of a tree

A tree topology is a combination of a star network topology and a bus topology(the number of Star networks is connected using Bus)

Advantages of tree Topology

Here, we divide the whole network into segments (star networks), which can be easily managed and maintained.

This topology provides a hierarchical as well as central data arrangement of the nodes.

There is no traffic problem as there is a dedicated point to point links for every computer.

Adding new devices won’t disrupt data transmissions.

If one segment is damaged, other segments are not affected.

Disadvantages of tree Topology

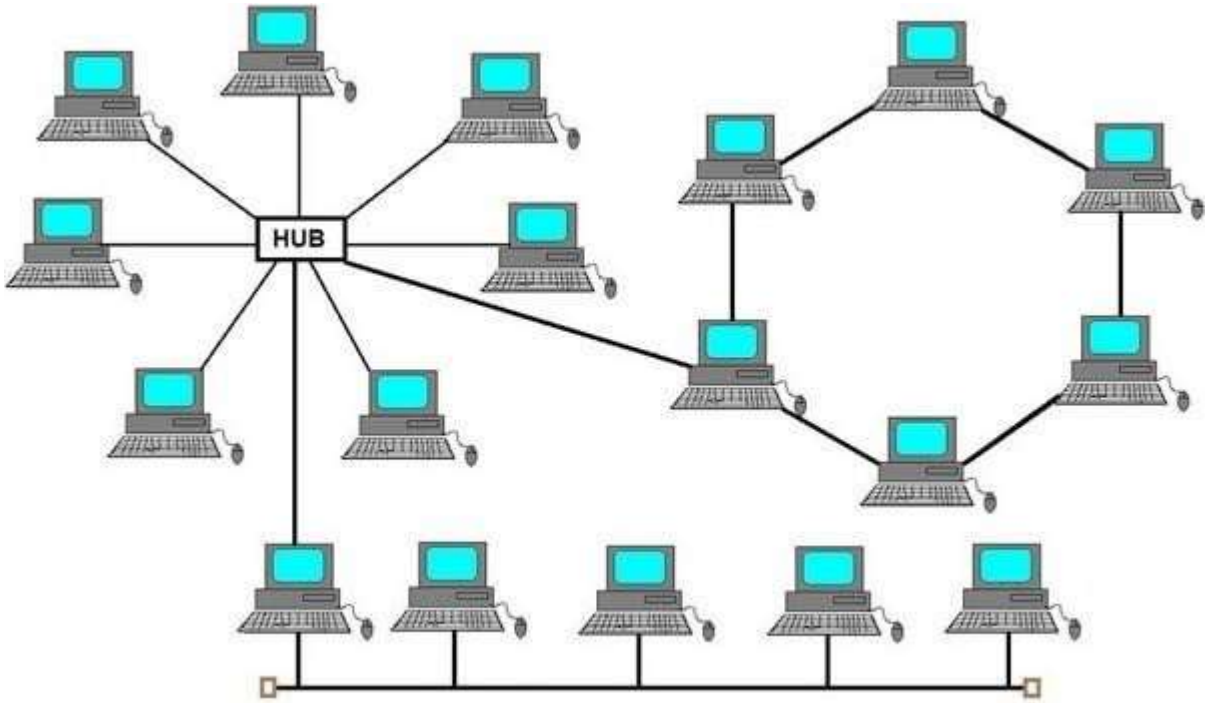
Because of its basic structure, tree topology, relies heavily on the main bus cable, if it breaks whole network is crippled.

If the computer in first level is erroneous, next level computer will also go under problems.

As more and more nodes and segments are added, the maintenance becomes difficult.

Scalability of the network depends on the type of cable used.

Hybrid topology



A hybrid topology is a type of network topology that uses two or more differing network topologies

This topology setup allows for most transmissions to be distributed even if one of the connections goes down

Advantages of Hybrid Topology

Its easy to increase the size of network by adding new components, without disturbing existing architecture.

Hybrid Network can be designed according to the requirements of the organization and by optimizing the available resources

Disadvantages of Hybrid Topology

One of the biggest drawback of hybrid topology is its design. Its not easy to design this type of architecture and its a tough job for designers

Costly Infrastructure

IP Address

An IP address is a unique address that identifies a device or domain on the internet or a local network. IP stands for "Internet Protocol," which is the set of rules governing the format of data sent via the internet or local network.

IP addresses are the identifier that allows information to be sent between devices on a network: they contain location information and make devices accessible for communication.

An IP address is a unique identifier assigned to a device or domain that connects to the Internet.

Each IP address is a series of characters, such as '192.168.1.1'.

- **Static IP Address**
- **Dynamic IP Address**
- **Private IP Address**
- **Public IP Address**

Static IP Addresses

A static IP address is an IP address that cannot be changed. In contrast, a dynamic IP address will be assigned by a Dynamic Host Configuration Protocol (DHCP) server, which is subject to change. Static IP address never changes, but it can be altered as part of routine network administration.

Dynamic IP address:

Dynamic IP addresses always keep changing. It is temporary and are allocated to a device every time it connects to the web. Dynamic IPs can trace their origin to a collection of IP addresses that are shared across many computers.

Public IP Addresses

A public IP address is an address where one primary address is associated with your whole network. In this type of IP address, each of the connected devices has the same IP address.

Private IP Addresses

A private IP address is a unique IP number assigned to every device that connects to your home internet network, which includes devices like computers, tablets, smart phones, which is used in your household.