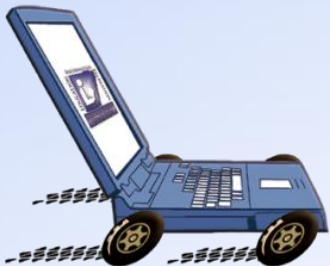


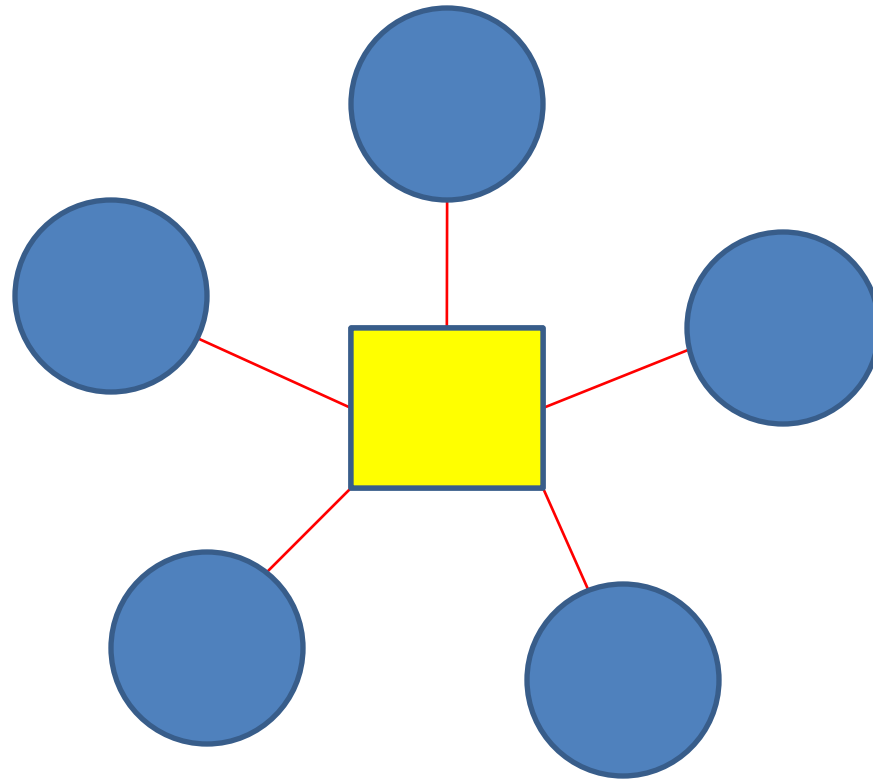
Network Topologies



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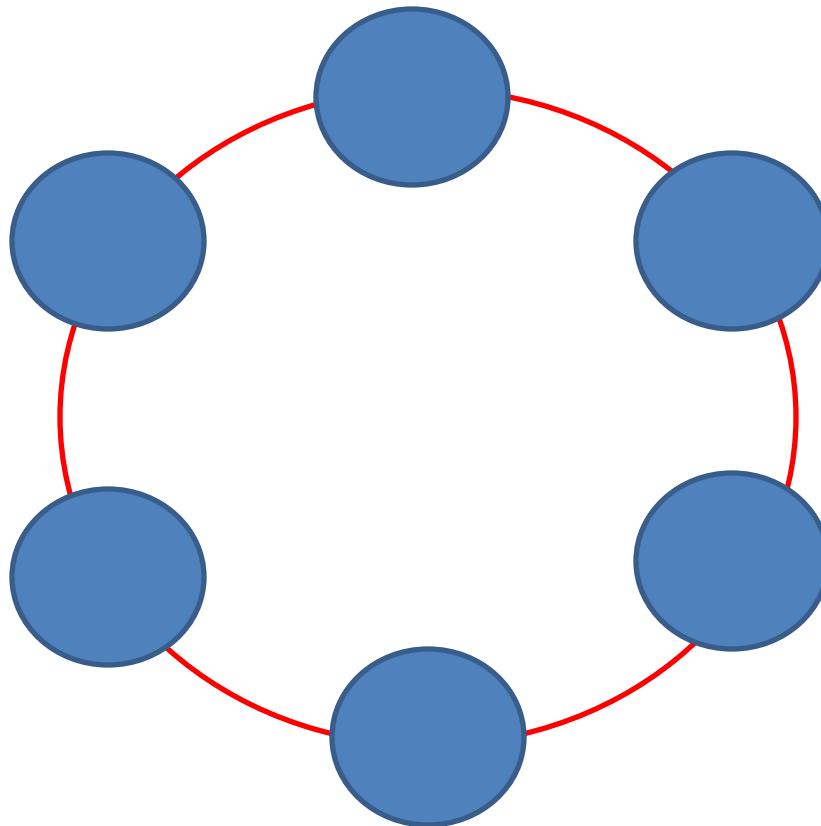
Star Topology



Star Topology Advantages & Disadvantages

- A central connection point for all workstations and peripherals
- Central connection point is not necessarily a server-more typically it is a hub
- Any link can fail without affecting the rest of the network
- Requires a lot of cable to link all devices
- Wireless removes the cable problem
- Device with a failed link would be cut off from the network and unable to receive data

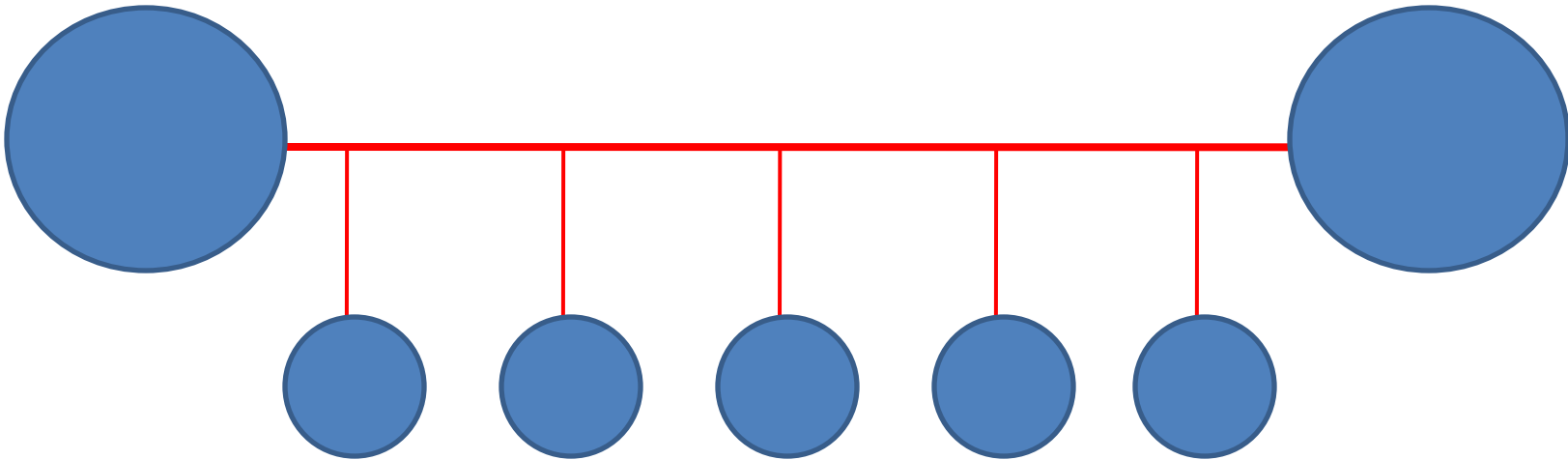
Ring Topology



Ring Topology Advantages & Disadvantages

- All devices connected in a circle-each device has two neighbors
- Data is transmitted from one device to another around the ring
- Minimizes cabling
- Failure of any one device can take down the entire network
- Infrequently used today

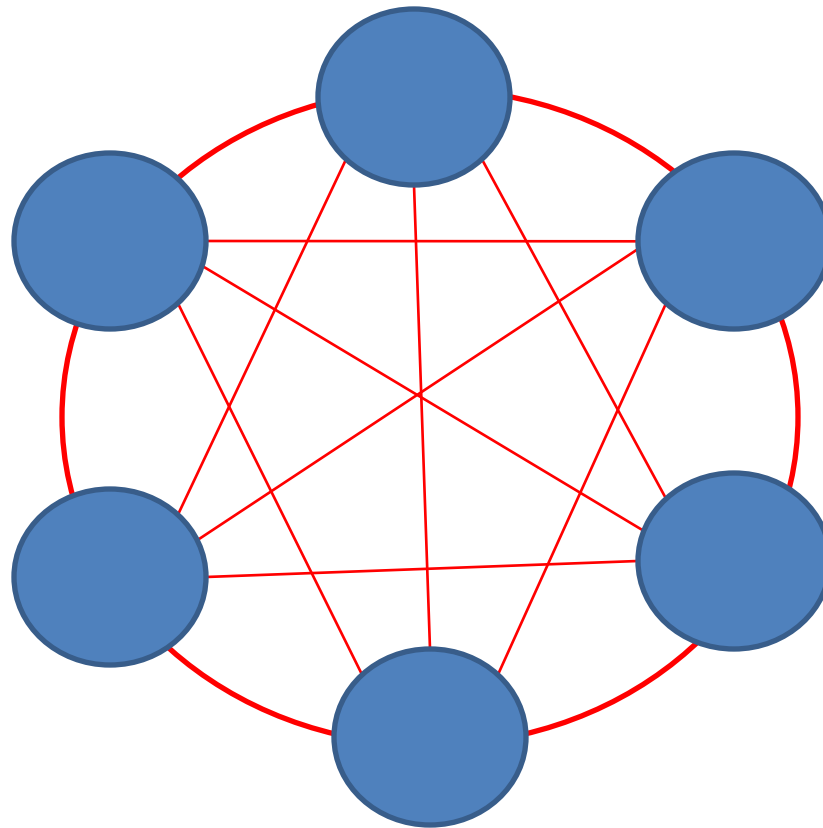
Bus Topology



Bus Topology Advantages

- Uses a common backbone to connect all network devices
- Backbone functions as a shared communication link which carries network data
- Backbone stops at each end of the network with a special device called a terminator
- Work best with a limited number of devices
- Too many computers are likely to perform poorly
- If backbone cables fail, entire network is unusable

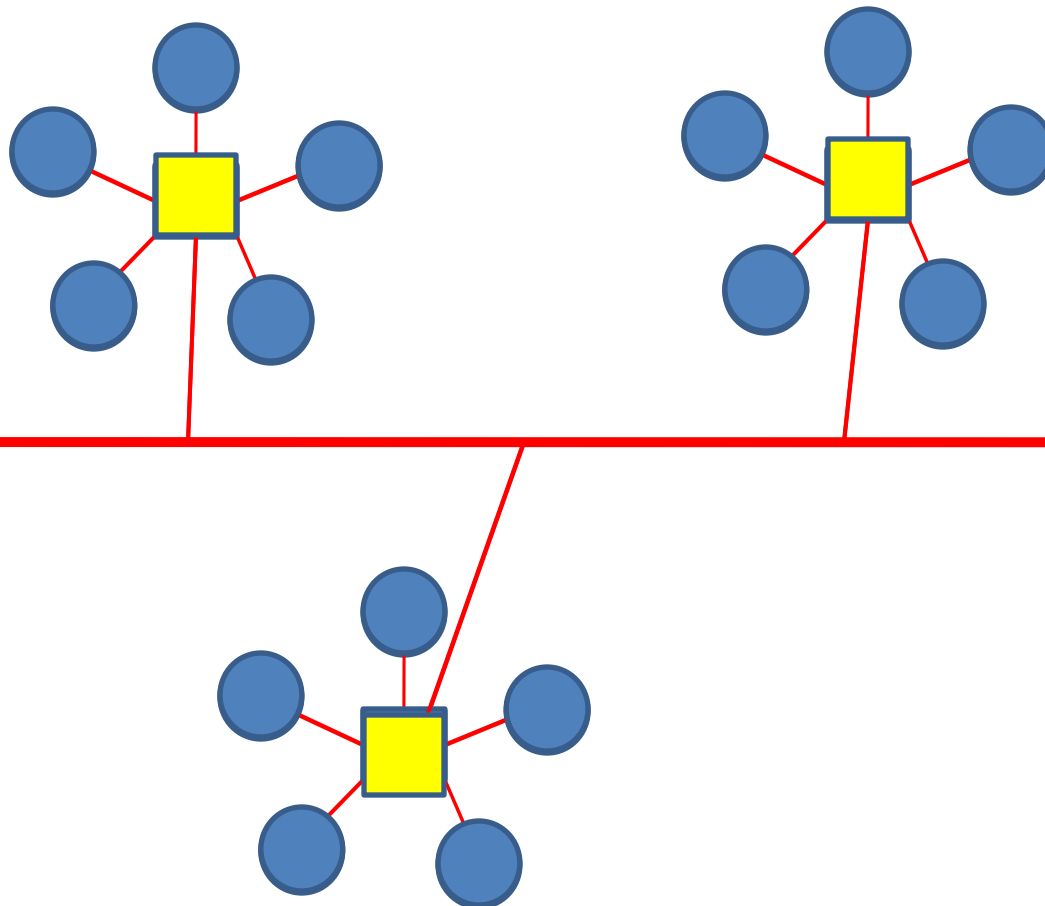
Mesh Topology



Mesh Topology Advantages & Disadvantages

- Connects each network device to many other network devices
- Data can take any of several possible paths from its source to its destination
- Redundant data pathways make a mesh network very robust
- If several links fail, data can follow alternative functioning links to reach its destination

Tree Topology



Tree Topology Advantages

- Blend of star and bus networks
- Multiple star networks are connected into a bus configuration by a backbone
- Excellent flexibility for expansion-single link to the backbone can add an entire group of star configured devices-can be accomplished using the same type of hub used as the central connection point in a star network