

In the initial network diagram, we observe a collection of network devices that lack interconnection. Without a means of connectivity or data exchange, this setup does not technically qualify as a functional network. A network requires a structure in which devices are connected and capable of sharing information.

In the revised diagram, we see a complete, connected network architecture using Ethernet cabling. Here, devices are organized within a hierarchical design that facilitates information sharing across the network. The end hosts connect to access layer switches, which provide direct network access to devices. The access switches then link to the distribution layer switches, which manage inter-VLAN routing, security policies, and traffic flow between different segments. At the topmost level, core switches interconnect the distribution layers, handling high-speed data transfer and maintaining optimal network performance. A router between the two LANs allows further interconnection and routing between network segments, creating a cohesive, functional network structure that supports both scalability and efficient traffic management.