

Distinguish, differentiate, compare and explain what is the Difference between Routers and Bridges. Comparison and Differences.

Bridges

Bridges operates in both the physical and the data link layer. As a physical layer device, it regenerates the signal it receives. As a data link layer device, the bridge can check the PHYSICAL/MAC addresses (source and destination) contained in the frame. A bridge has a table used in filtering decisions. It can check the destination address of a frame and decide if the frame should be forwarded or dropped. If the frame is to be forwarded, the decision must specify the port. A bridge has a table that maps address to ports. Limit or filter traffic keeping local traffic local yet allow connectivity to other parts (segments).

Routers

Routers are identified as Layer-3 devices, as routers process logical addressing information in the Network header of a packet (such as IP addresses).

Difference between Routers and Bridges

S.No.	Routers	Bridges
1	Router operates in network layer of OSI Model.	Bridge operates in data link layer of OSI Model.
2	Use to connect the LAN and WAN.	Use to connect two different LAN segments.
3	Transmits data in the form of packets.	Transmits data in the form frames.
4	Reads the IP Address of a device.	Reads the MAC Address of a device..
5	Has more ports compare to bridges.	Has only two ports.
6	Uses routing table for sending data.	Does not use any routing table for sending data.