Major differences between a Router and Switch

Routers and switches both play an important role in networking, and these are used to connect the computers from each other and to network devices or other devices as well.

The routers and switches look similar, but the usage and functionality of these are different from each other even when they are integrated together in the devices. And if you are going to be networking trainee, then you must know about the differences and usage of these devices.

Routers Vs. Switches:

Router is a three network layer device works on the OSI model. It is used to connect the two different networks and also identify the various network devices from their IP addresses. It is used on the network gateways where two or more local networks connected. It connects one local network to the other local networks.

Switches are the two network layer devices operation at the data link layers of the OSI model. They connect the devices on a single computer network and using their physical and MAC addresses, and they forward the data to the correct address. It uses the packet switching to secure the data from their end and forward it to the correct addresses.

Here Networkers Guru sharing a comparison data to identify their differences and usage:

Points	Switches	Routers
Network Layers	Switches work with the 2 data link network layers of OSI model	Routers work with the 3 network of OSI model
Form of data transmission	L2 switches use frames to transfer data and L3 switches use frames and packets of transfer data	Routers use the packets for secu forwarding the data
Routing process	Switches take time to decide the routing	Routers take instant routing deci

decision		
Usage purpose	They are used to connect the two or more networks for transmission	They are used to connect nodes same or different networks as we
addresses used for Data forwarding	They use the physical and MAC addresses for forwarding the data	They use the IP addresses for da forwarding
Transmission speed	10/100 Mbps, 1 Gbps	