

Switch, Router and Hub

Tuesday, January 27, 2026 8:47 PM

Hub

- Connects network devices on an internal network.
- Not intelligent; does not filter data.
- Broadcasts all incoming data to every connected port.
- Creates unnecessary traffic and security concerns.

Switch

- Similar to a hub but intelligent.
- Learns and stores the physical (MAC) addresses of connected devices.
- Directs data only to the intended destination port.
- Reduces unnecessary network traffic.
- Preferred over hubs.

Router

- Forwards data between different networks based on IP addresses.
- Determines if a data packet is meant for its own network or another.
- Acts as a gateway for a network.
- Hubs and switches exchange data *within* a local network, while routers exchange or *route* data *between* networks, like to the internet.

Summary

- Hubs and switches create networks.
- Routers connect networks

Router

