



1.3.3 Network Hardware

Network Interface Card (NIC)

A **Network Interface Card (NIC)** allows a computer or other device to **connect to a network**.

A NIC can provide a **MAC address**, which uniquely identifies the network interface on a local network.

NICs can provide:

- **Wired connections**, such as Ethernet
- **Wireless connections**, such as Wi-Fi

Key point

NIC = allows a device to connect to a network.

Switch

A **switch** connects multiple devices together on a network.

When a switch receives data, it examines the destination information and **forwards the data to the intended device**.

A switch uses **MAC addresses** to determine where data should be sent.

Key point

Switch = connects devices within a network and forwards data to the correct device.

Router

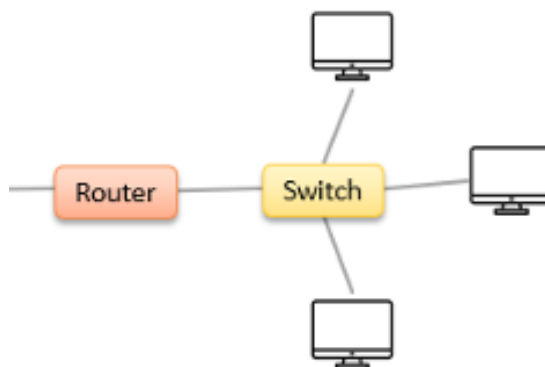
A **router** connects **different networks** together.

It examines the destination **IP address** of packets and determines where the packets should be forwarded.

For example, a router can connect a home LAN to the Internet.

Key point

Router = connects networks and forwards packets using IP addresses.





Gateway

A **gateway** connects **different types of networks**.

It can translate between different **network protocols**, allowing networks that use different protocols to communicate.

Key point

Gateway = connects different types of networks and can translate protocols.

Wireless Access Point (WAP)

A **Wireless Access Point (WAP)** allows wireless devices to **connect to a network**.

It sends and receives data using **radio waves**.

A WAP can provide wireless access to devices such as laptops, smartphones and tablets

Key point

WAP = allows wireless devices to connect to a network.

