

Router

(Network Device)

Elementrix Classes

What is a Router?

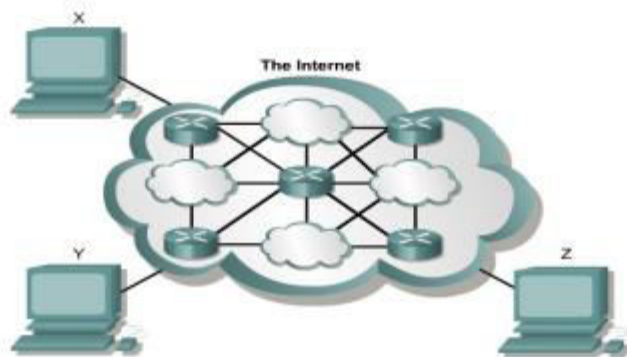
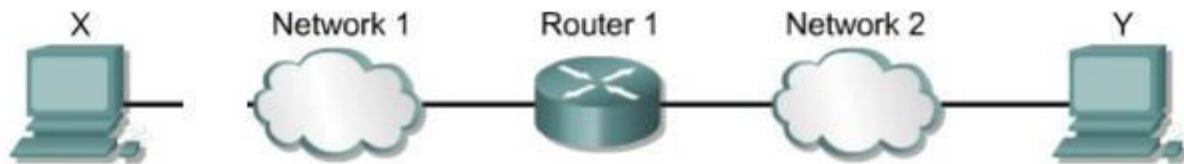
- ❑ A Router is a computer, just like any other computer including a PC. Routers have many of the same hardware and software components that are found in other computers including:
 - ❑ CPU
 - ❑ RAM
 - ❑ ROM
 - ❑ Operating System



- ❑ A router is a network device that operates at the Network Layer (Layer 3) of the OSI model.
- ❑ Its primary function is to connect different networks and intelligently route data packets between them, even those across vast geographical distances.
- ❑ Think of a router as a smart traffic cop directing packets towards their final destination across the vast network landscape of the internet.

- ❑ Router is the basic backbone for the Internet. The main function of the router is to connect two or more than two network and forwards the packet from one network to another. A router connects multiple networks. This means that it has multiple interfaces that each belong to a different IP network. When a router receives an IP packet on one interface, it determines which interface to use to forward the packet onto its destination. The interface that the router uses to forward the packet may be the network of the final destination of the packet (the network with the destination IP address of this packet), or it may be a network connected to another router that is used to reach the destination network.

Router connects two network



- ❑ A router uses IP to forward packets from the source network to the destination network. The packets must include an identifier for both the source and destination networks. A router uses the IP address of the destination network to deliver a packet to the correct network. When the packet arrives at a router connected to the destination network, the router uses the IP address to locate the specific computer on the network.

Example:

- ❑ Imagine sending an email from your home computer to a friend in another country. Your router determines the best path across the internet, ensuring the email hops from network to network effectively, finally reaching your friend's computer.

पढ़िए और पढ़ाइये

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