



THE INTERNET & THE WORLD WIDE WEB

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JOBS INTERNET CAN DO

The internet's primary role is transferring computerized data like text, images, audio, and video. It supports tasks from handling emails and web searches to advanced functions like website creation and programming.



HOW DATA TRAVELS IN THE INTERNET

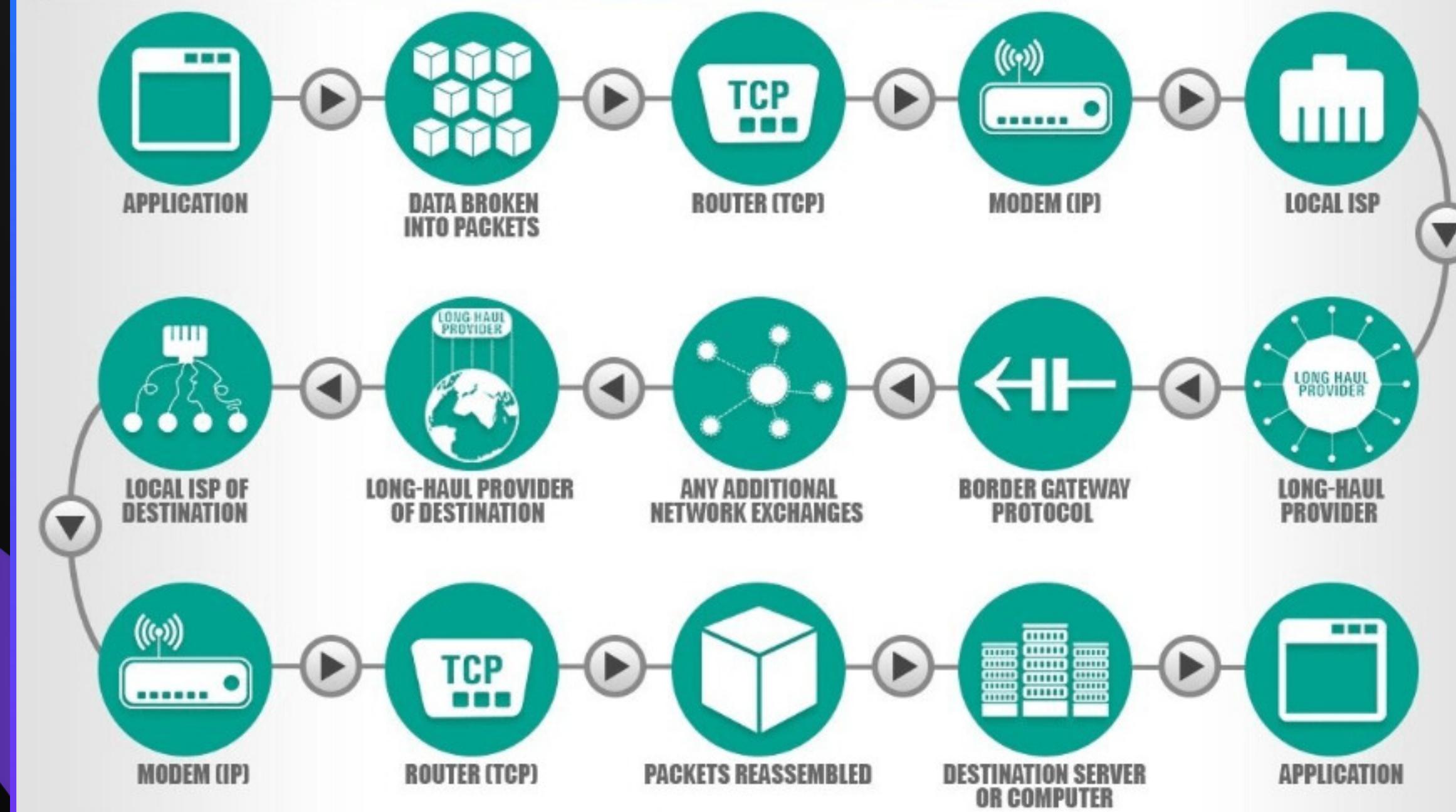
- Data and information are transferred around the world through wired or wireless transmission media.
- Data travels the internet through a series of interconnected networks using protocols such as TCP/IP (Transmission Control Protocol/Internet Protocol). It is divided into packets, transmitted via routers and switches, and reassembled at the destination.



HOW DATA MOVES THROUGH THE INTERNET

Data is split into bits called “packets”. Each packet travels through the Internet via a series of checkpoints.

ONE POSSIBLE JOURNEY OF A PACKET COULD BE:



HOW DATA IS SENT THROUGH THE INTERNET

- Circuit switching Circuit switching involves a continuous, dedicated connection between two points, like traditional telephone calls or dial-up internet connections. However, it can be inefficient as the connection remains open, blocking others from using it when not actively transmitting.



HOW DATA IS SENT THROUGH THE INTERNET

- Packet switching Packet switching, on the other hand, breaks messages into smaller independent packets that travel separately and reassemble at the destination. This method is more efficient than circuit switching, as it doesn't require a constant connection, allowing for better use of the network and simultaneous communication.



COMPARISON BETWEEN CIRCUIT & PACKET SWITCHING

SWITCHING METHOD

Circuit Switching

Packet Switching

PROS

It offers a dedicated transmission channel that is reserved until it is disconnected

Packets can be routed around network congestion. Packet switching makes efficient use of network bandwidth.

CONS

Dedicated channels can cause delays because a channel is unavailable until one side disconnects. It uses a dedicated physical link between the sending and receiving devices.

Packets can get lost while taking alternative routes to the destination. Messages are divided into packets that contain source and destination information.

COMPARISON BETWEEN CIRCUIT & PACKET SWITCHING

SWITCHING METHOD

Circuit
Switching

KEY FEATURE

It offers the capability of storing messages temporarily to reduce network congestion.

Packet
Switching

The two types of packet switching are datagram and virtual circuit. Datagram packets are independently sent and can take different paths throughout the network. Virtual circuit uses a logical connection between the sources and the destination.

WHAT COMPUTERS DO ON THE INTERNET

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SERVER

- act as electronic filing cabinets, storing, and delivering data upon request.



WHAT COMPUTERS DO ON THE INTERNET

ACTIVE DIRECTORY DOMAIN SERVICES (ADDS)

- Manage user accounts, computer accounts, organizational units, and application services.



WHAT COMPUTERS DO ON THE INTERNET

DYNAMIC HOST CONFIGURATION PROTOCOL (DHCP)

- A server that configures IPv4 and IPv6 (IP Addresses).

DOMAIN NAME SYSTEMS (DNS)

- Assign names to IP Addresses.



WHAT COMPUTERS DO ON THE INTERNET

FILE SERVER

- Machine that hold and manages documents.

WEB SERVER

- Handle mail and web servies.

PRINT SERVER

- Connects printer to client computer through the internet



WHAT COMPUTERS DO ON THE INTERNET

ROUTER

- Hardware device designed to receive, analyze, and send incoming packets to another network.



THANK YOU

