HOW THE INTERNET WORKS · PART 7 OF 9 · AGES 11–16

Internet Key Terms

The words you need to explain how the internet works, each with a one-line definition.

Addresses and names

IP address	The number that identifies a device on a network, like a street address. IPv4 uses four numbers from 0 to 255, such as 192.0.2.10.
Domain name	A website's human-friendly name, such as example.com. It stands in for the IP address, which is hard to remember.
DNS	The Domain Name System: the internet's phone book, which translates domain names into IP addresses.
URL	The full address of one page or file: a scheme (https), a domain name and a path, as in https://example.com/news.

Moving data

Packet	A small chunk of data sent across a network, with a header (addresses and other details) and a payload (the data itself).
Protocol	An agreed set of rules for formatting and sending data, so that different devices can understand each other.
TCP/IP	The internet's core protocols. IP addresses and delivers packets; TCP checks they all arrive, in order, and resends lost ones.
Router	A device that forwards packets between networks, choosing the next step towards each packet's destination address.
ISP	Internet service provider: the company that connects your home, school or phone to the internet.
Bandwidth	How much data a connection can carry each second, measured in megabits or gigabits per second (Mbps, Gbps).
Latency	How long data takes to travel from one point to another, in milliseconds. Lower is better; distance adds latency.

The web and security

HTTP	Hypertext Transfer Protocol: the rules a browser uses to request web pages and a server uses to send them back.
HTTPS	HTTP sent over an encrypted connection, so others on the network cannot read or change it. Shown by a padlock.
TLS	Transport Layer Security: encrypts the connection and checks the server's certificate. Its older name is SSL.
Server	A computer that stores data or runs a service and answers requests from clients, such as your web browser.
The cloud	Servers in data centres that you use over the internet, for storage, email, apps or games, instead of your own device.

Lanes and journey time

Bandwidth is like the number of lanes on a road; latency is how long the journey takes. More lanes carry more traffic, but they do not make a long trip short.

NEXT IN THE SERIES
8. Internet Myths: What People Get Wrong

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