

Internet

IP-Adress (internet protocol adress): #.#.#.#

- 4 numbers
 - Each number is a value between 0 and 255
 - Uniquely identifies other computers on the internet
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DHCP: Dynamic Host Configuration Protocol: Software that ISPs (Internet Service Providers) run to provide an IP to a host.

DNS (domain name system) servers: Converts domain names to corresponding IP addresses.

PORTS:

- Examples:
 - 80: HTTP (hypertext transfer protocol)
 - 443: SSL
 - 25: Email
 - ...
 - Used to uniquely identify a transaction over a network by specifying both the host, and the service.
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Protocol:

- An established **set of rules** that determine how data is **transmitted** between different devices in the same network.
- Essentially, it allows connected devices to communicate with each other, regardless of any differences in their internal processes, structure or design.

TCP (Transmission Control Protocol)

- Ensures that packets can get to their destination
- Supports sequence numbers: ensures data gets to its intended destination

Difference UDP (User Datagram Protocol) and TCP

- UDP does not guarantee delivery of packets
 - For example: video chat, live video, etc.
 - TCP does guarantee delivery of packets
 - For example: movies, etc.
 - They do tend to buffer as you don't want to miss a few seconds or a minute of a movie
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The world is **running out** of IP addresses:

- IPv4 (32-bit IP address) --> IPv6 (128-bit IP address)

[Internet Image](#)