

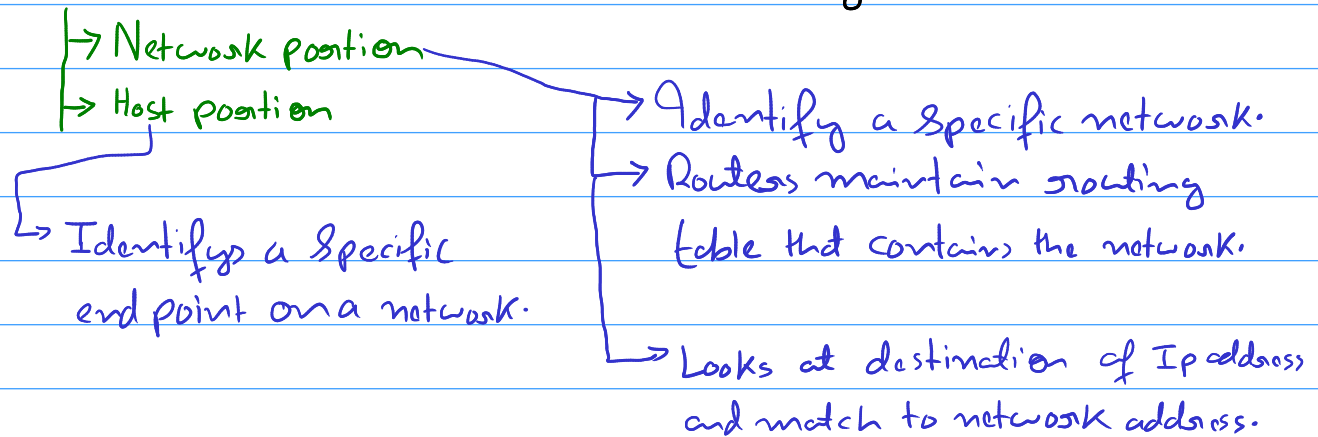
Ip addressing

★ IPV4

⇒ 32 bit address

⇒ Example: 255.142.64.31

⇒ Has a hierarchical structure to enable routing.



★ Special address

① Directed broadcast address

- Host sends data to all the device on a specific network.
- Binary 1s in the entire host portion of the address.

② Local broadcast address

- Used to communicate with all devices on the local network.
- Address are all binary 1s.
255.255.255.255
- This is used by host when requesting IP address from a **DHCP** server.

(Dynamic host configuration protocol)

③ Local loopback address

- Lets a system to send a message to itself for testing.
(127.0.0.1) {Anything in 127 range is a loopback address}

::1 → IPv6 loopback address.

★ Private address space

→ 10.0.0.0/8

→ 172.16.0.0/12

→ 172.168.0.0/16

⇒ These address are not routable on the internet.

⇒ For getting on internet these private address need to be NATed.

↳ Network address translation

⇒ ISP block traffic from these private address.

★ IPv4 Link local address

⇒ If pc is configured for DHCP and no server is available then

↳ PC automatically chose IP address in range 169.254.0.0/16

⇒ This address range is non-routable.

★ Subnet mask

⇒ Used to determine network and host portion.