RECAP/

Static and dynamic addressing

Static

Network administrator must manually config the network information for a host

At minimum, this includes host IPv4 address, subnet mask, default gateway

It can provide increased control, but is more time consuming

Automatic

Using protocol DHCP

Its generally the preferred method of assigning IPv4 addresses to hosts on large networks bcs it reduces the staff burden and eliminates entry errors

Also the address is not permanently assigned to a host but is only leased for a period of time. Of the host is powered down or taken off the network the address is returned to the pool for reuse

When u enter a network your device DHCP client contacts the local DHCP server via a wireless connection.

The DHCP server assigns an IPv4 address to your laptop

Home networksm the DHCP server may be located at the ISP and a host on the home network receives its IPv4 config directly from the ISP

Many have wireless router and modem in this case, the wireless router is both a DHCP client and a server

DHCPv4 configuration

Is configured with a range, or pool, of IPv4 addresses that can be assigned to DHCP clients

A client that needs an IPv4 address will send a DHCP discover message which is a broadcast with a

destination IPv4 address of 255.255.255.255 and a

destination MAC address of FF-FF-FF-FF-FF-FF

All hosts on the network will receive this broadcast DHCP frame, but only a DHCP server will reply

The server will respond with a DHCP offer, suggesting an IPv4 address for the client

The host then sends a DHCP request asking to use the seggested IPv4 address

The server rosponds with a DHCP acknowledgment