

Explanation of key network parameters such as IMEI, MAC, and IP addresses along with their importance in networking and device identification.

1. IMEI (International Mobile Equipment Identity)

- Explanation: A unique 15-digit number assigned to every mobile device by its manufacturer. It identifies the particular device and not the user or account.

- Meaning: The IMEI number has a significance in tracking the stolen device, blocking devices from the network when lost, and identifying the device when it connects to a network.

2. MAC (Media Access Control) Address

- Meaning: This is a unique address that is assigned to a device's network interface card (NIC) for communications within a network segment. It normally has 48 bits hexadecimal address, such as 00:1A:2B:3C:4D:5E.

- Importance: MAC addresses are very fundamental in transmitting data over the local networks. They provide routers and switches with the possibility of identifying devices on the network, hence directing packets of data to the desired device. They are further useful in access control as well as security.

3. IP (Internet Protocol) Address:

Definition A unique numerical address assigned to each device connected to a network that uses Internet Protocol for communication. The two are IPv4 and IPv6, with IPv4 represented as 192.168.1.1, and IPv6 as 2001:0db8:85a3::8a2e:0370:7334.

- Role: IP addresses play a crucial role in identifying devices over the internet or a local network. They allow data to be routed from one device to another. They are also very important for activities such as browsing the web, where devices need to communicate across vast networks.

4. SSID (Service Set Identifier):

- Definition: An identification name for a Wi-Fi network that is different for each network, which will prevent confusion with any other network.

- Significance: It assists a device to identify and connect to a particular Wi-Fi network. Identifying the SSID becomes helpful in areas filled with multiple internet signals to pick up the one correct network.

- Definition: This address refers to a DNS server that converts human-readable domain names such as openai.com into IP addresses.

- Importance: DNS addresses are essential in the translation of user-friendly domain names into IP addresses. This helps users access websites without necessarily having to memorize the complex IP addresses.

6. Subnet Mask:

- What is it?: It is a 32-bit number, often called a subnet mask, used together with an IP address to divide an IP network further into subnetworks or subnets.

- Why does it matter?: Subnet masks allow one to distinguish what part of an IP address forms a network segment and which forms a host. In return, it simplifies IP address allocation while network performance and security may also benefit from dividing big networks into smaller ones.

7. Gateway Address

- Explanation: This is the default router or gateway address by which a device communicates with devices on other networks, including the internet.

- Importance: The gateway address allows devices on a local network to communicate with external networks. It is very important for internet access and connecting to resources beyond the local network.

Together, these parameters guarantee device identification, network organization, and data transmission. These provide connections within and across networks with reliability and security.

Link speed

39 Mbps

Security

WPA/WPA2-Personal

MAC address

be:ad:48:27:24:d5 (Random)

IPv4 address

192.168.29.40

IPv6 address

fe80::bcad:48ff:fe27:24d5
2405:201:e033:4801:bcad:48ff:fe27:24d5
2405:201:e033:4801:7523:7c4f:ef73:5bea

Advanced settings

Proxy None

IP settings DHCP

Privacy Use random MAC address

Metered Detect automatically

IMEI (SIM slot 1)

861888062655192

IMEI (SIM slot 2)

861888062655184

IMEI SV

69

IP address

192.168.29.40

2405:201:e033:4801:7523:7c4f:ef73:5bea

2405:201:e033:4801:bcad:48ff:fe27:24d5

fe80::bcad:48ff:fe27:24d5

Wi-Fi MAC address

Select a saved Wi-Fi network to view.

**Device Wi-Fi MAC address**

98:ac:ef:84:9a:b3

Bluetooth address

98:ac:ef:84:9a:b2

Serial number

64d7cfd4

Up time

46:00:42