**IPV4:**

An IPv4 address has a size of 32 bits, which limits the address space to 2^32 addresses. Of this number, some addresses are reserved for special purposes such as private network  and multi addressing

IPv4 addresses are usually represented in dot decimal notation, consisting of four decimal numbers, each ranging from 0 to 255, separated by dots, e.g., *172.16.254.1*. Each part represents a group of 8 bits of the address. In some cases of technical writing] IPv4 addresses may be presented in various hexadecimal, octal, or binary representations.

**IPV6:**

In IPv6, the address size was increased from 32 bits in IPv4 to 128 bits, thus providing up to 2^128 addresses. This is deemed sufficient for the foreseeable future. The smallest possible individual allocation is a subnet for 2^64 hosts, which is the square of the size of the entire IPv4 Internet. At these levels, actual address utilization ratios will be small on any IPv6 network segment. All modern desktop and enterprise server operating systems include native support for the IPv6 protocol, but it is not yet widely deployed in other devices, such as residential networking routers, voice over IP (VoIP) and multimedia equipment, and some networking hardware

***The Difference Between IPv4 and IPv6 Addresses***

**An IP address is binary numbers but can be stored as text for human readers.  For example, a 32-bit numeric address (IPv4) is written in decimal as four numbers separated by periods. Each number can be zero to 255. For example, 1.160.10.240 could be an IP address.**

**IPv6 addresses are 128-bit IP address written in hexadecimal and separated by colons. An example IPv6 address could be written like this: 3ffe:1900:4545:3:200:f8ff:fe21:67cf.**

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