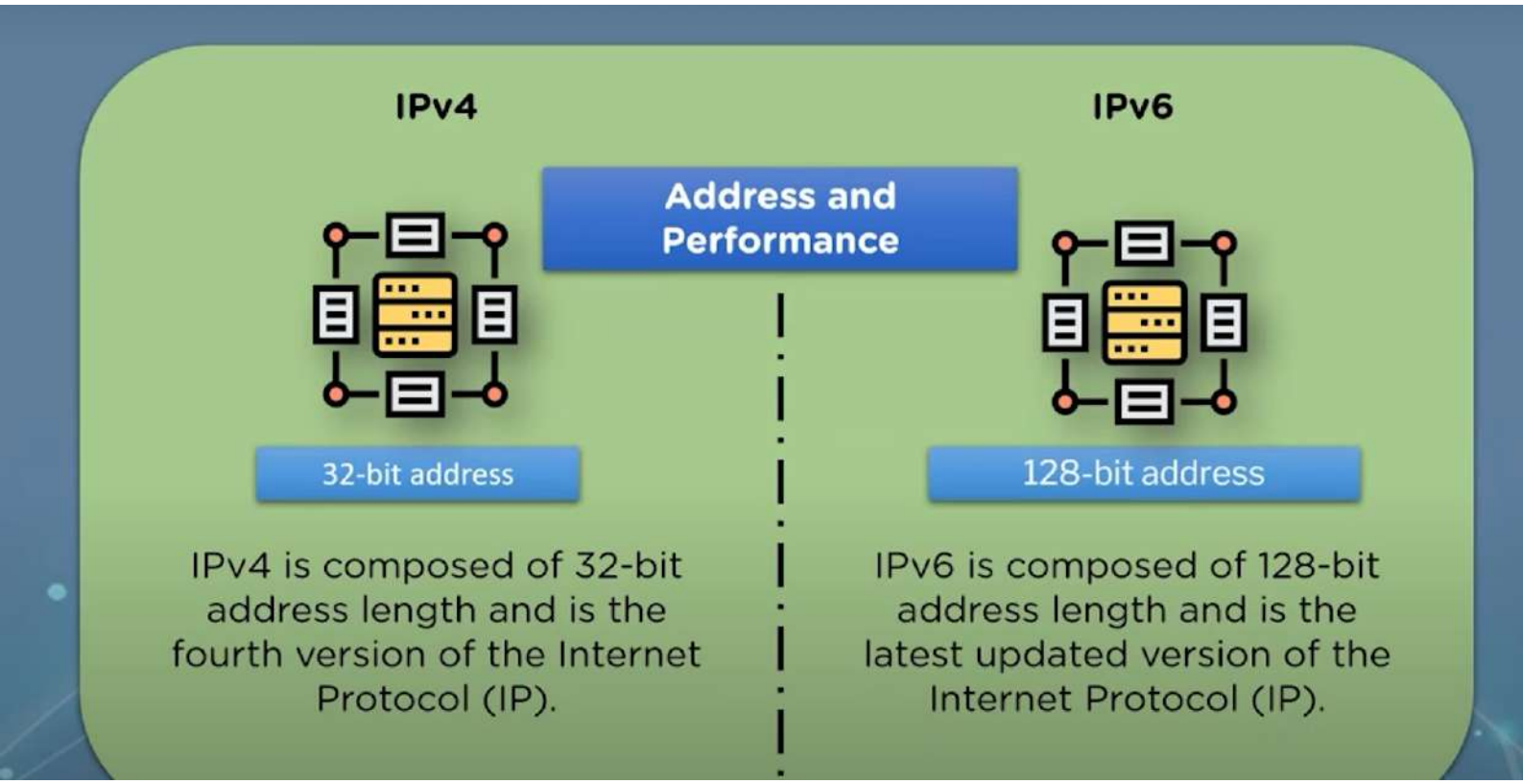
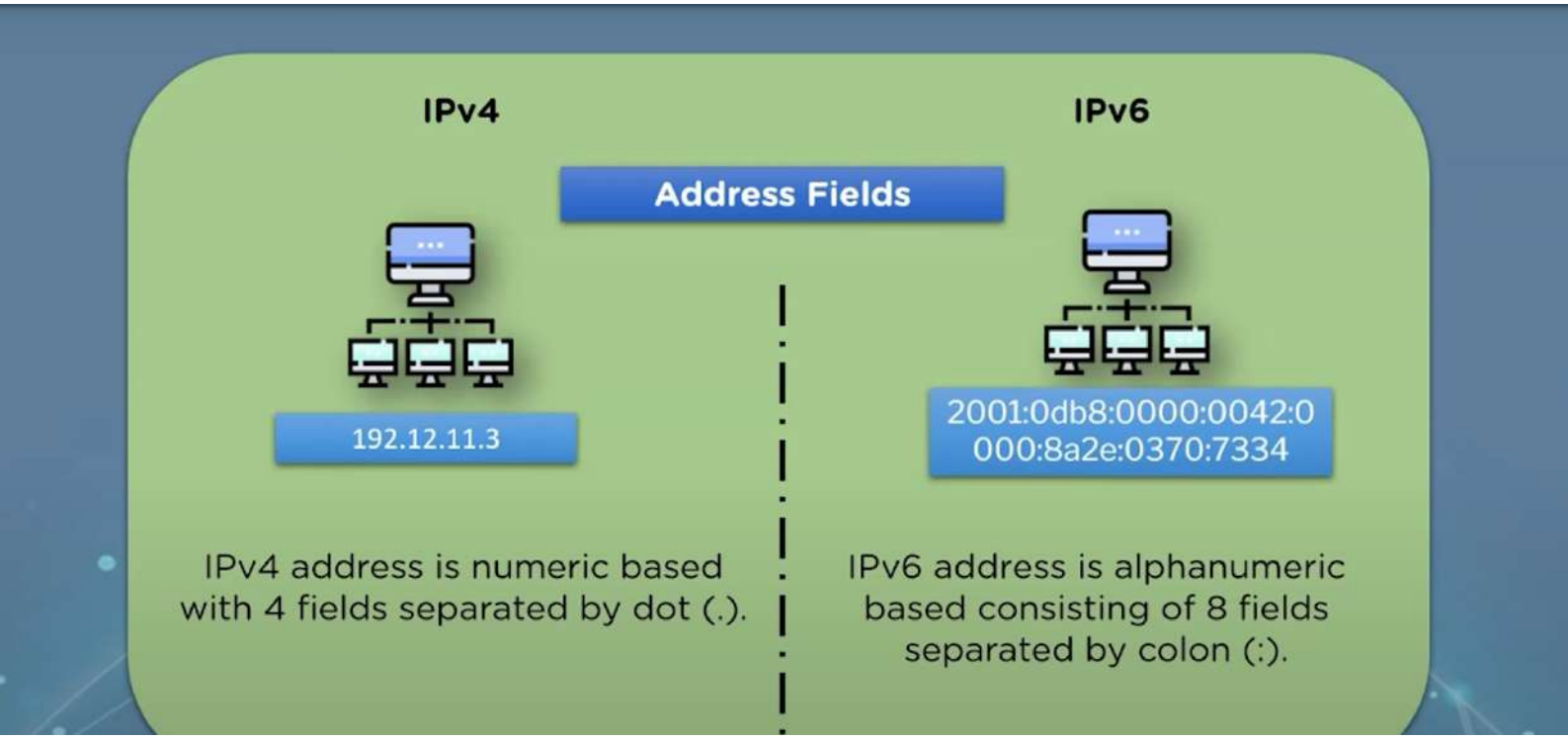
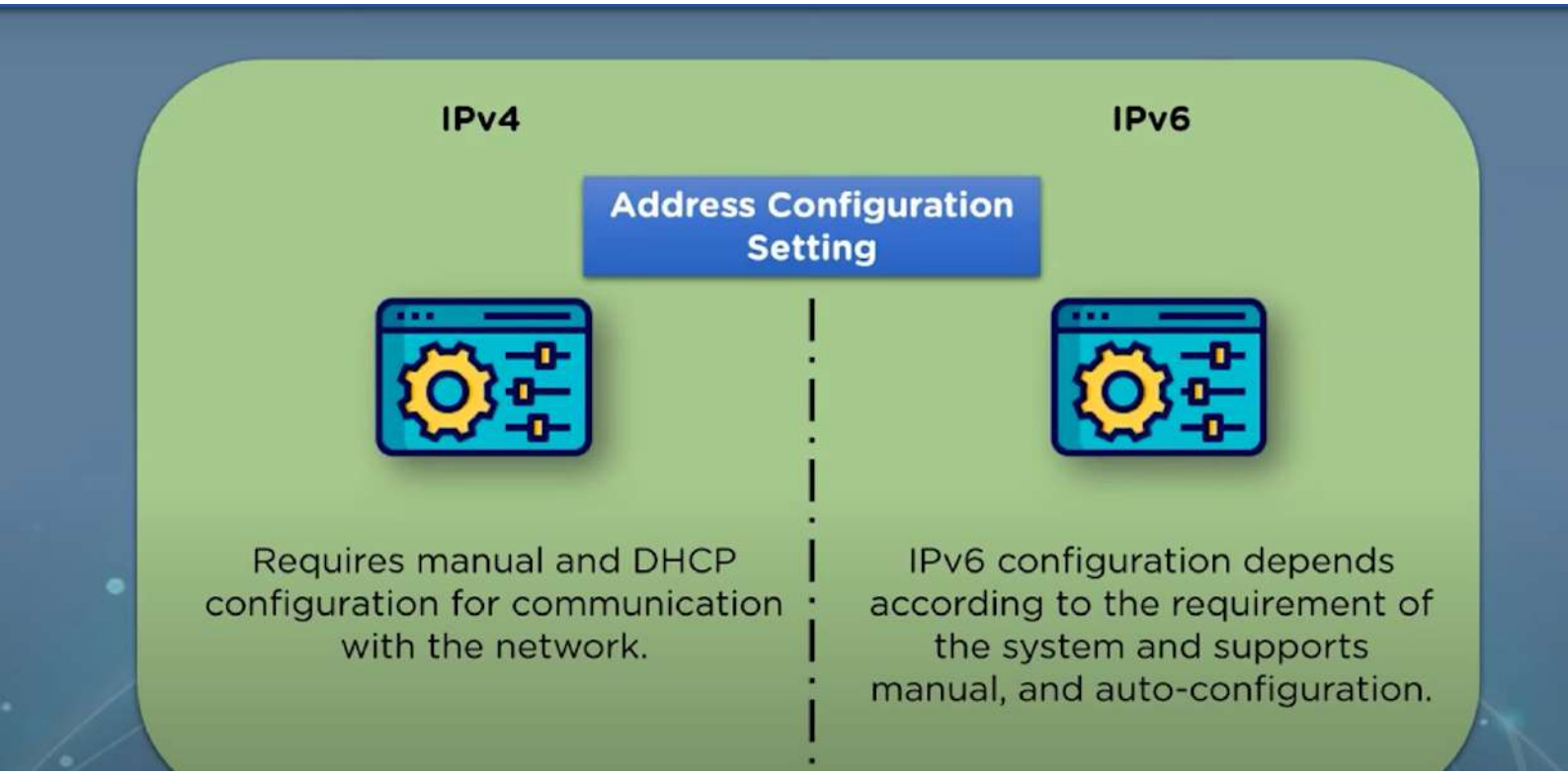

IPv4
IPv6
Address and Performance
32-bit address
128-bit address
IPv4 is composed of 32-bit address length and is the fourth version of the Internet Protocol (IP).
IPv6 is composed of 128-bit address length and is the latest updated version of the Internet Protocol (IP).


IPv4
IPv6
Address Fields
192.12.11.3
2001:0db8:0000:0042:0000:8a2e:0370:7334
IPv4 address is numeric based with 4 fields separated by dot (.).
IPv6 address is alphanumeric based consisting of 8 fields separated by colon (:).


IPv4
IPv6
Address Configuration Setting
Requires manual and DHCP configuration for communication with the network.
IPv6 configuration depends according to the requirement of the system and supports manual, and auto-configuration.

Address Security Functioning

IPv4

IPv4 does not provide any mandatory security measures, and it depends on the application being used.

IPv6

IPv6 provides, integrated Internet Protocol Security **{IPSec}** over different levels of the network architecture.

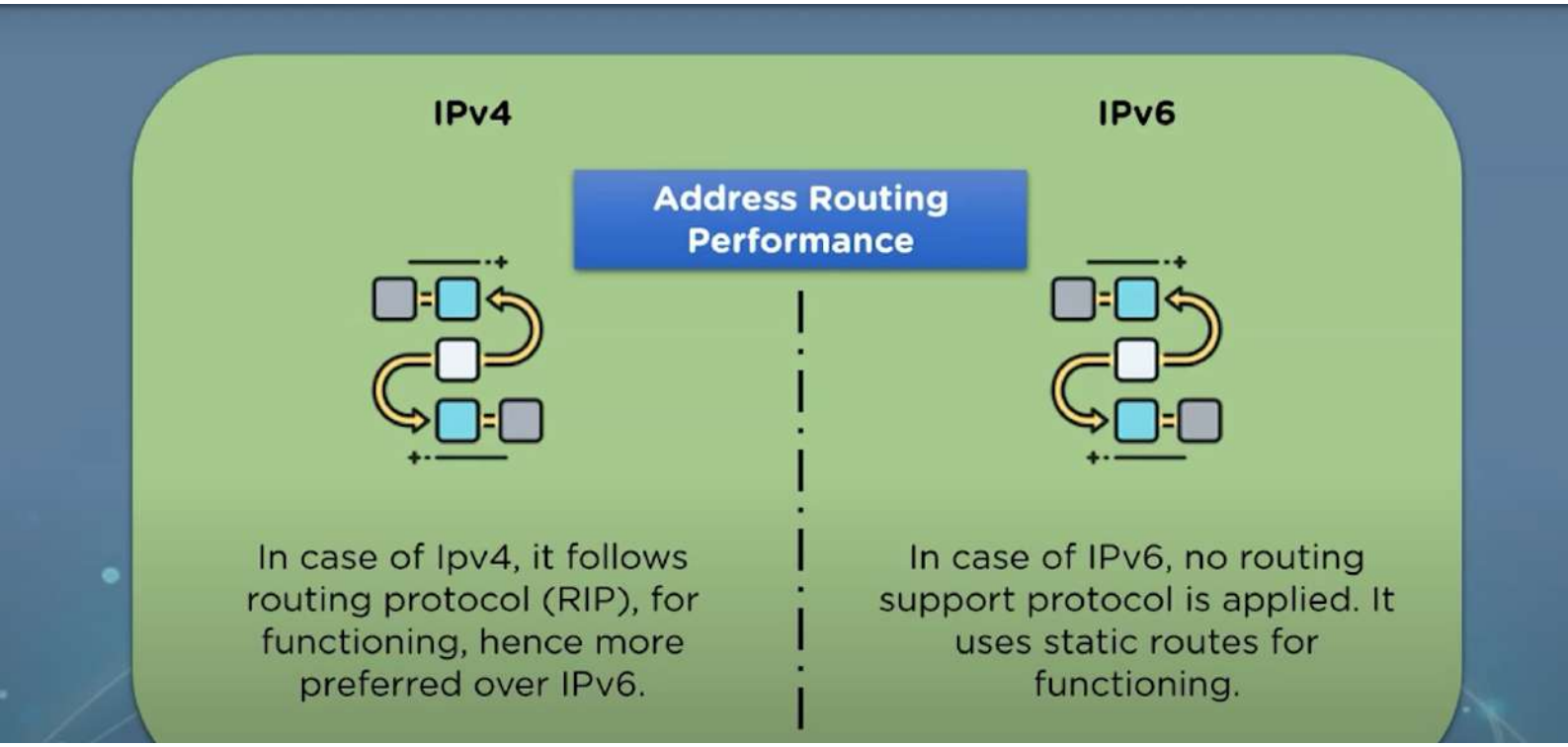
IPv4

IPv6

Address Encryption and Authentication

In case of IPv4 addressing no encryption or authentication services are initiated.

IPv6 provides proper encryption and authentication services for the address.


IPv4
IPv6
Address Routing Performance
In case of Ipv4, it follows routing protocol (RIP), for functioning, hence more preferred over IPv6.
In case of IPv6, no routing support protocol is applied. It uses static routes for functioning.