

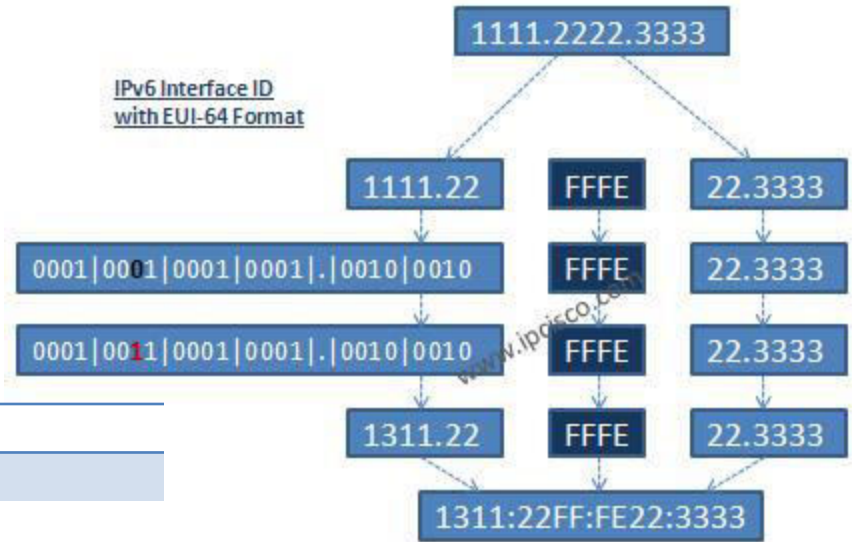
IPv6 Cheat Sheet

Routing Protocols	
IPv4	IPv6
RIP	RIPng
OSPFv2	OSPFv3
EIGRP	EIGRP for IPv6
BGPv4	MP-BGP4
IS-IS	IS-IS for IPv6
RIP	RIPng

IPv6 Tunnels
Manual Tunnels
GRE Tunnels
IPv4 Compatible Tunnels
6to4 Tunnels
ISATAP
Teredo

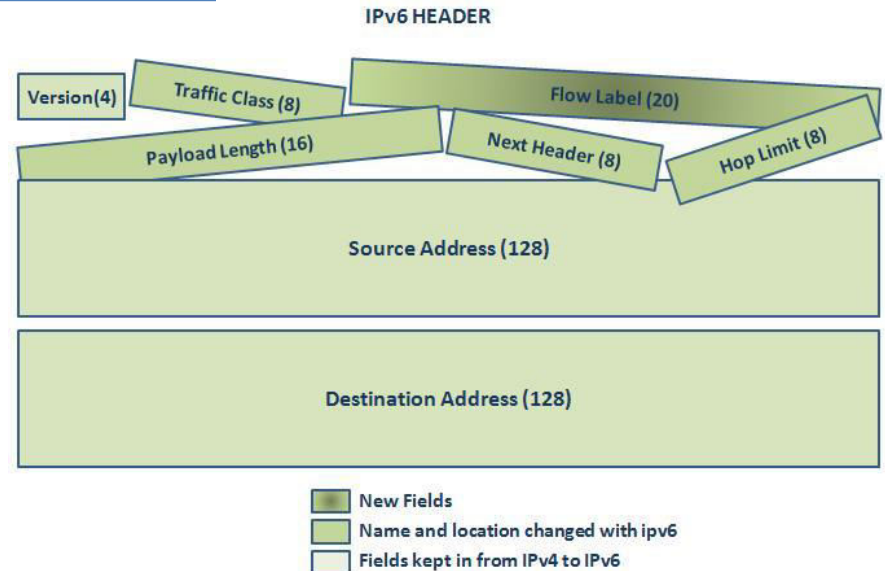
IPv6 General
128 Bit Addresses
40 Bytes Header Length
Hexadecimal Notation
$2^{128} = 340,282,366,920,938,463,463,374,607,431,768,211,456$ address

IPv6 Interface ID with EUI-64 Format



IPv6 Translation and Tunneling Mechanisms

Manual	Transmitting IPv6 Traffic over IPv4 Networks. Supports only IPv6 traffic.
6to4 Tunneling	Connecting IPv6 Networks over IPv4 Network.
6rd Tunneling	Encapsulating IPv6 packets over IPv4 Network.
ISATAP	Encapsulating and transmitting IPv6 packets over IPv4 Networks.
GRE	Transmitting IPv6 Traffic over IPv4 Networks. Supports multiple protocols.
Teredo	Encapsulating IPv6 packets inside IPv4 packets across these IPv4-based NAT devices and IPv4 Network.
Dual Stack	Devices are configured with both an IPv4 address and an IPv6 address.

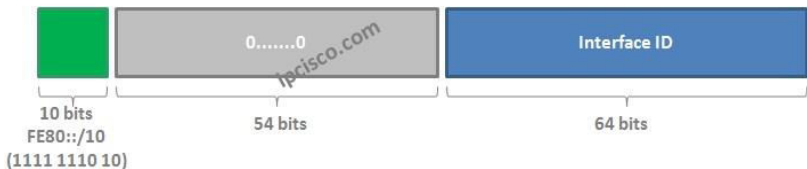


- New Fields
- Name and location changed with ipv6
- Fields kept in from IPv4 to IPv6

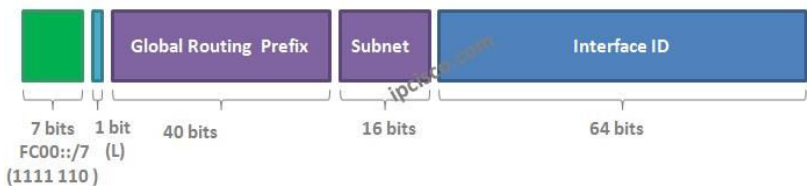
IPv6 Address Types

IPv6 Cheat Sheet

Link-Local Unicast IPv6 Address



Unique-Local Unicast IPv6 Address



IPv6 Multicast Address



Flags

R	0=No embedded RP 1=Embedded RP
P	0=Not based on unicast 1=Based on unicast
T	0=Permanent Address 1=Temporary Address

Scope

- 1 Node
- 2 Link
- 3 Subnet
- 4 Admin
- 5 Site
- 8 Organization
- E Global
- F Reserved
- Others (6,7,9,A,B,C,D) are Unassigned.

IPv6 Anycast Address



IPv6 Solicited-Node Multicast Address



Global Unicast IPv6 Address

