2001: 0211: 00AB: 0000 ipv4 48

2001:0211:00AB:0000:0000:0000:0000:0001 ipv6 128

SHORTEN OF IPV6

=2001: 211 : AB : 0 : 0 : 0 : 0 : 1

=2001: 211: AB :: 1

8 4 2 1 = F

1 0 1 0 = A

0 1 0 1 = 5

2001: 0000:0000: 0211:0000:0000:0000:0001

2001 :: 211: 0: 0: 0 : 1

IPV4 TO IPV6

192.168.10.62

IPV6 = \*\*\*\*\*\*\*\*\* - 88 0’s - 00000000000 (32 bit)

128 64 32 16 8 4 2 1

8 4 2 1 8 4 2 1

192 = 1 1 0 0 0 0 0 0 = C0

168 = 1 0 1 0 1 0 0 0= A8

10 = 0A

62 = 3E

IPV6 = 0 :: C0A8 : 0A3E

convert link local into MAC Address:

i) Drop the First four Hextets

ii) Flip the 7th bit of 5th Hextet

iii) Drop the 2nd Octet of 6th Hextet

iv) Drop the 1st Octet of 7th Hextet

IPV6: FE80::5D39:84FF:FE29:3064

FE80:0000: 0000: 0000: 5D39:84FF:FE29:3064

5F39:8429:3064

MAC : 5F39:8429:3064

5D39 = 0101 1101 0011 1001

0101 1111 0011 1001 = 5F39

1 – ipv6 shorten form e naua

2 – ipv4 to convert ipv6

3 – ipv6 to mac address