IPv6
Subnetting

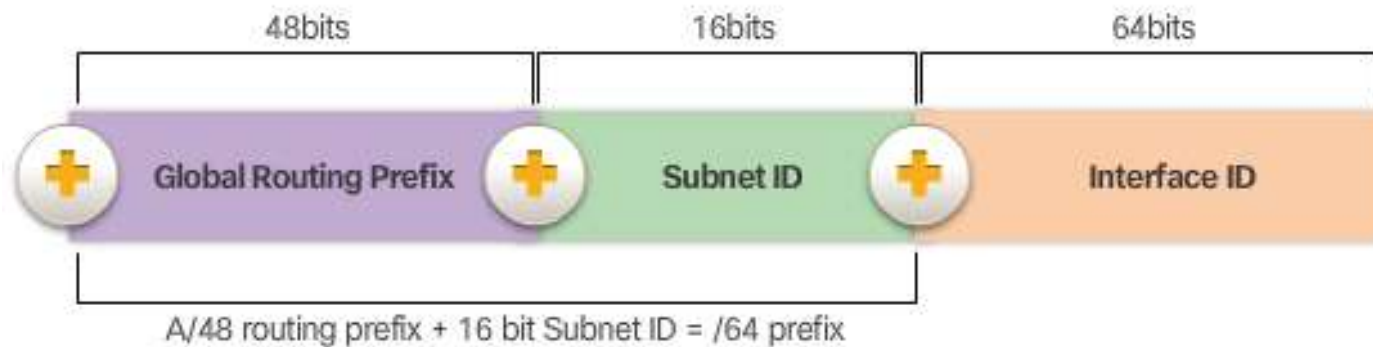# Conținut

✓ Adrese IPv6 Global Unicast

✓ Împărțirea în sub-rețele folosind *Subnet ID*

Adrese IPv6 global unicast
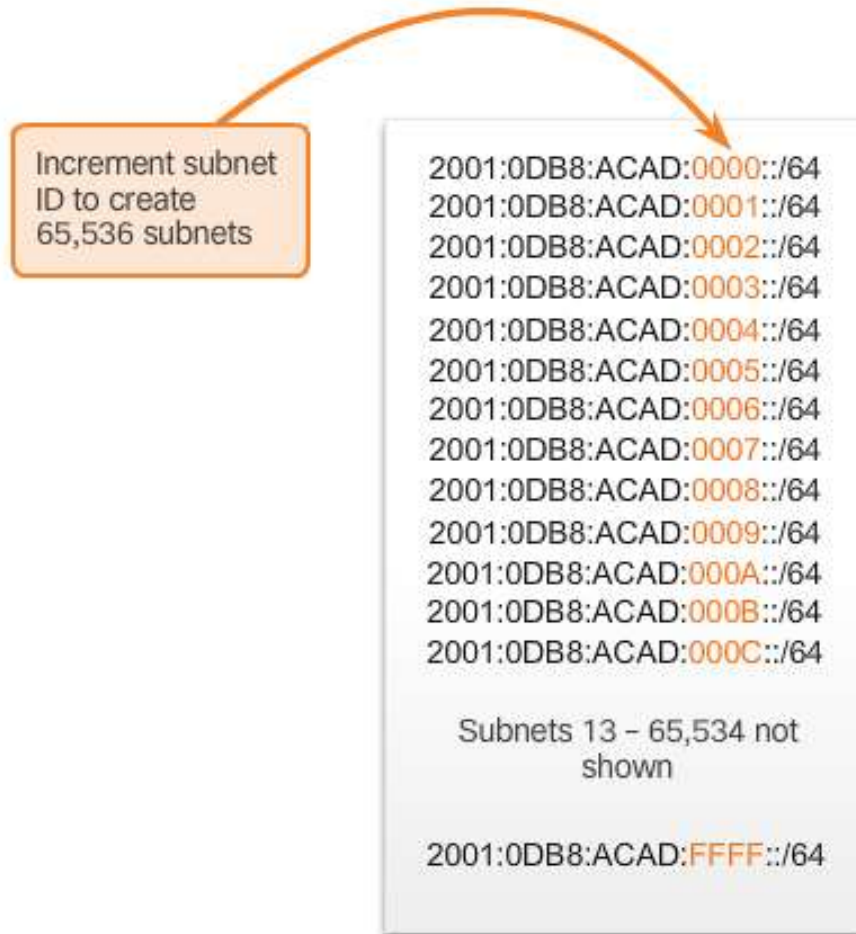
Subnetting using the subnet ID

Address Block: 2001:0DB8:ACAD::/48

Increment subnet ID to create 65,536 subnets

2001:0DB8:ACAD:0000::/64
2001:0DB8:ACAD:0001::/64
2001:0DB8:ACAD:0002::/64
2001:0DB8:ACAD:0003::/64
2001:0DB8:ACAD:0004::/64
2001:0DB8:ACAD:0005::/64
2001:0DB8:ACAD:0006::/64
2001:0DB8:ACAD:0007::/64
2001:0DB8:ACAD:0008::/64
2001:0DB8:ACAD:0009::/64
2001:0DB8:ACAD:000A::/64
2001:0DB8:ACAD:000B::/64
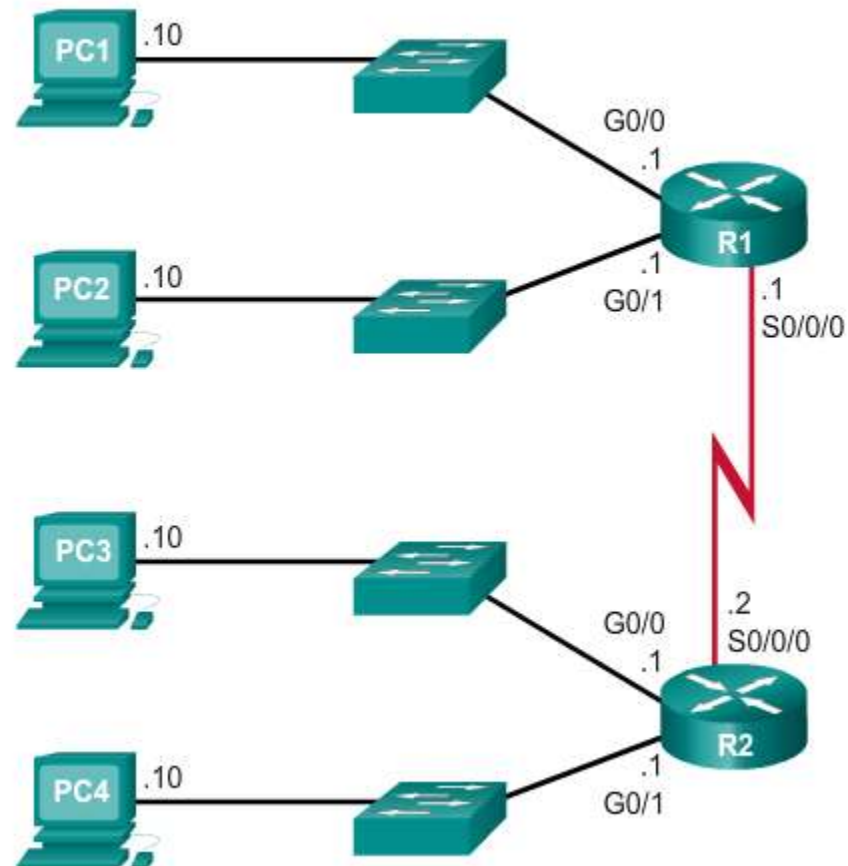2001:0DB8:ACAD:000C::/64

Subnets 13 – 65,534 not shown

2001:0DB8:ACAD:FFFF::/64

IPv6 Subnet Allocation – Fig 1

Example Topology

IPv6 Subnet Allocation – Fig 2
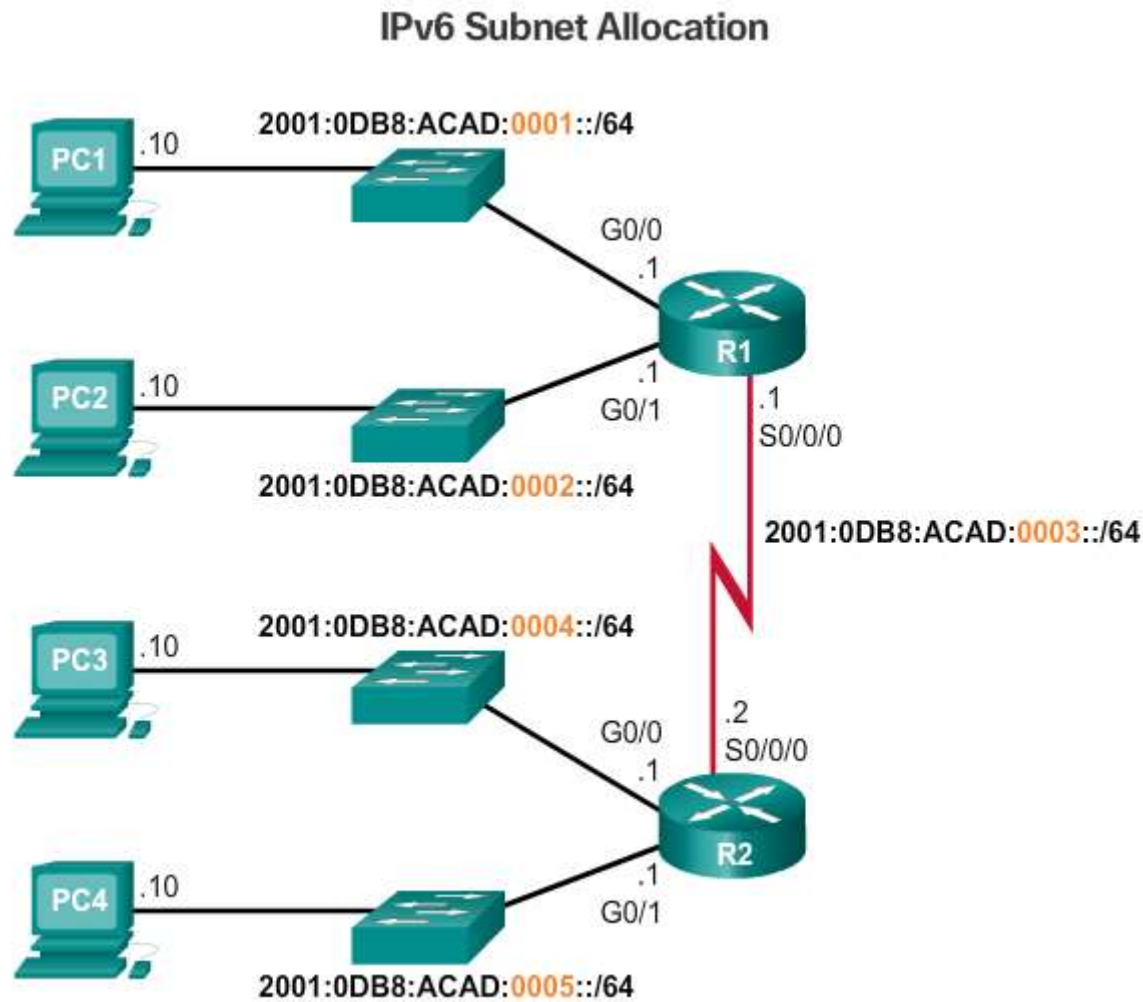
IPv6 Subnetting

Address Block: 2001:0DB8:ACAD::/48

2001:0DB8:ACAD:0000::/64
2001:0DB8:ACAD:0001::/64
2001:0DB8:ACAD:0002::/64
2001:0DB8:ACAD:0003::/64
2001:0DB8:ACAD:0004::/64
2001:0DB8:ACAD:0005::/64
2001:0DB8:ACAD:0006::/64
2001:0DB8:ACAD:0007::/64
2001:0DB8:ACAD:0008::/64

2001:0DB8:ACAD:FFFF::/64

5 subnets allocated from 65,536 available subnets

IPv6 Subnet Allocation – Fig 3

IPv6 Subnet Allocation

IPv6 Subnet Allocation – Fig 4

IPv6 Address Configuration


```
R1(config)# interface gigabitethernet 0/0
R1(config-if)# ipv6 address 2001:db8:acad:1::1/64
R1(config-if)# exit
R1(config)# interface gigabitethernet 0/1
R1(config-if)# ipv6 address 2001:db8:acad:2::1/64
R1(config-if)# exit
R1(config)# interface serial 0/0/0
R1(config-if)# ipv6 address 2001:db8:acad:3::1/64
R1(config-if)# end
R1#
```