

The provided IP range has a /24 subnet mask, 255.255.255.0 (default for a Class C network).

Total host bits available: 8 (since /24 = first 24 bits are reserved for the network).

For creating 4 subnets, we require 2 additional bits for subnetting

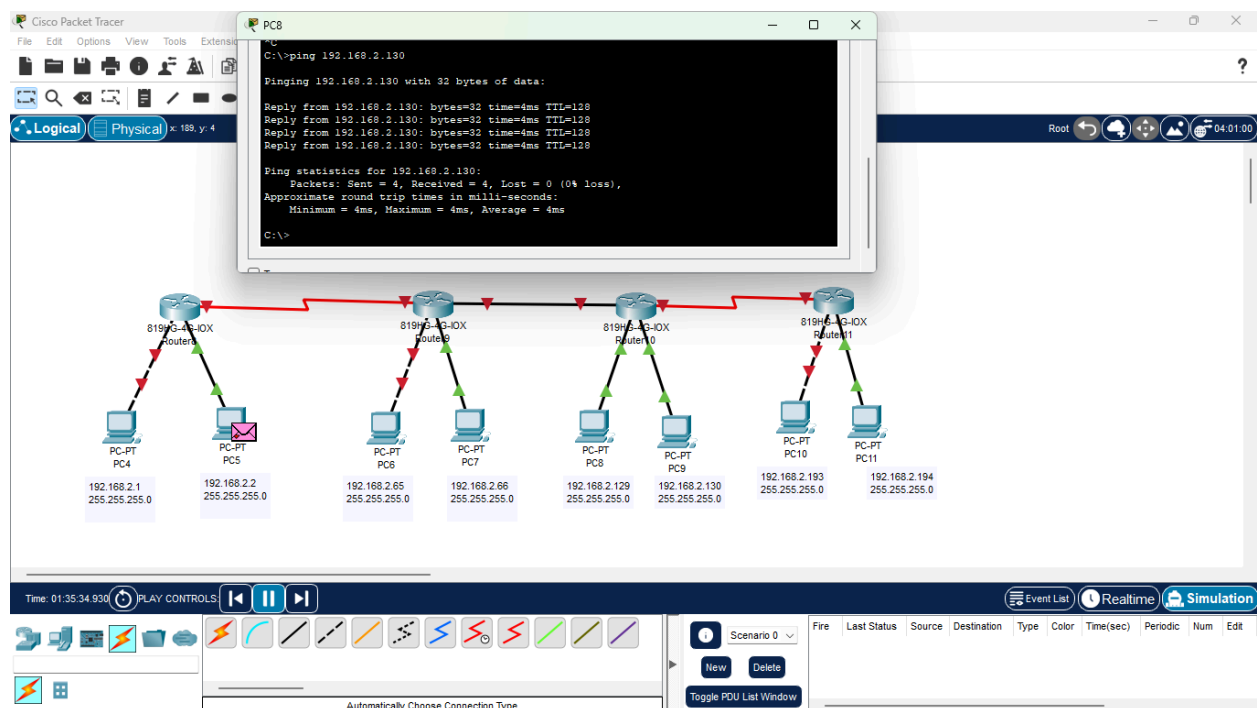
New subnet mask = /26 → 255.255.255.192 (since 26 bits are utilized for network).

Each subnet will have

$2^6=64$ addresses (as there are 6 bits available for hosts).

Two addresses are reserved (one for network and one for broadcast) from these, leaving 62 valid hosts per subnet.

Subnet	Network Address	First Usable IP	Last Usable IP	Broadcast Address
Subnet 1	192.168.1.0/26	192.168.1.1	192.168.1.62	192.168.1.63
Subnet 2	192.168.1.64/26	192.168.1.65	192.168.1.126	192.168.1.127
Subnet 3	192.168.1.128/26	192.168.1.129	192.168.1.190	192.168.1.191
Subnet 4	192.168.1.192/26	192.168.1.193	192.168.1.254	192.168.1.255



Developing a subnet through the routers and assigning IP's to PC's

It is handled with verifying ping command to check the working of the devices after subnetting in the network