



Network

CIDR, VLSM, FLSM



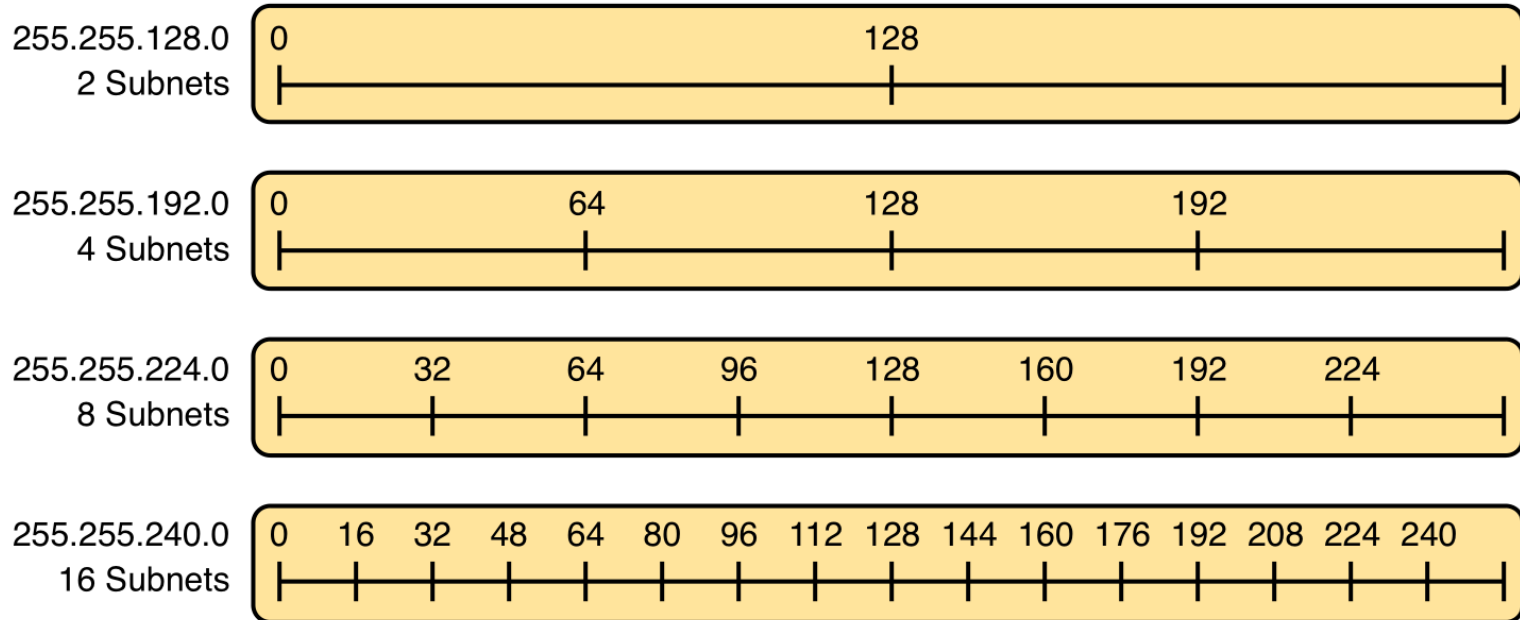
CIDR: “Easy” Masks

255.0.0.0	/8	11111111 00000000 00000000 00000000
255.255.0.0	/16	11111111 11111111 00000000 00000000
255.255.255.0	/24	11111111 11111111 11111111 00000000

	IP Address	Mask	Subnet ID	Broadcast Address
1	10.77.55.3	255.255.255.0	10.77.55.0	10.77.55.255
2	172.30.99.4	255.255.255.0	172.30.99.0	172.30.99.255
3	192.168.6.54	255.255.255.0	192.168.6.0	192.168.6.255
4	10.77.3.14	255.255.0.0	10.77.0.0	10.77.255.255
5	172.22.55.77	255.255.0.0	172.22.0.0	172.22.255.255
6	1.99.53.76	255.0.0.0	1.0.0.0	1.255.255.255

CIDR: “Difficult” Masks

Subnets of 172.16.0.0: 172.16.___.0



IP Calculator

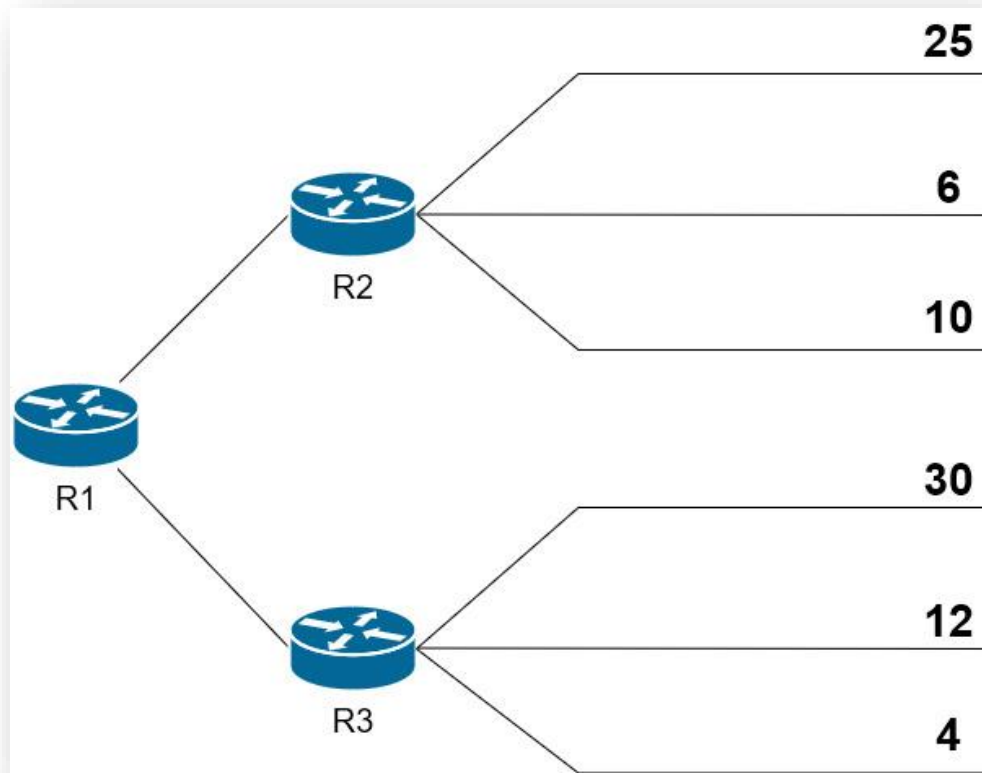
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user@de11-xps:~$ ipcalc 172.16.134.56/19
```

Address:	172.16.134.56	10101100.00010000.100 00110.00111000
Netmask:	255.255.224.0 = 19	11111111.11111111.111 00000.00000000
Wildcard:	0.0.31.255	00000000.00000000.000 11111.11111111

=>

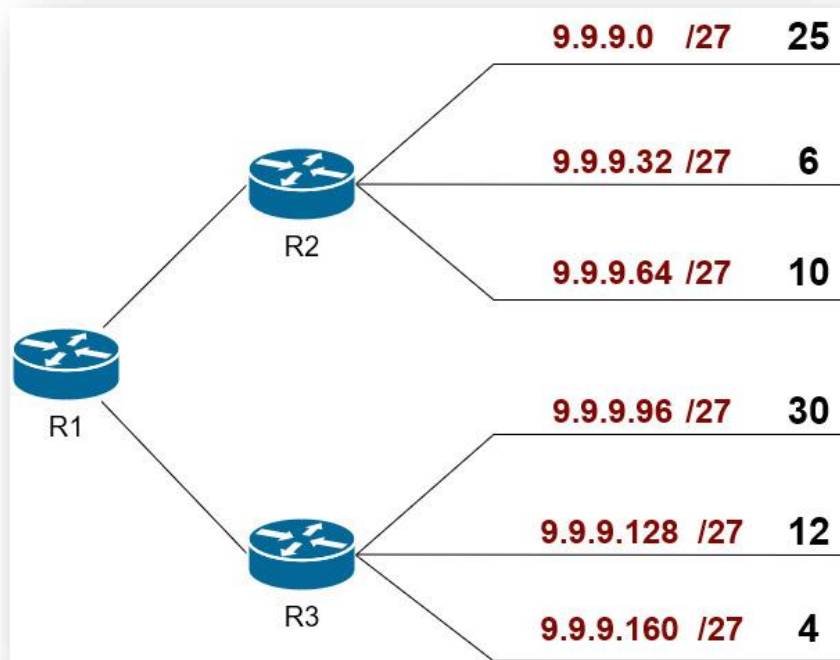
Network:	172.16.128.0/19	10101100.00010000.100 00000.00000000
HostMin:	172.16.128.1	10101100.00010000.100 00000.00000001
HostMax:	172.16.159.254	10101100.00010000.100 11111.11111110
Broadcast:	172.16.159.255	10101100.00010000.100 11111.11111111
Hosts/Net:	8190	Class B, Private Internet

VLSM vs FLISM

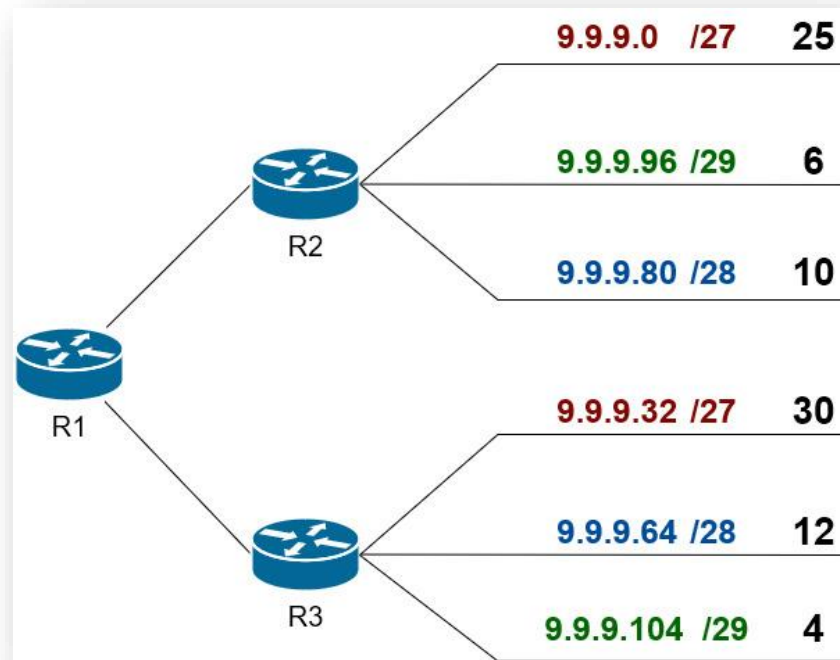


VLSM vs FLSM

FLSM



VLSM



Quiz

1. Which of the following is the resident subnet ID for IP address 10.7.99.133/24?
 - A. 10.0.0.0
 - B. 10.7.0.0
 - C. 10.7.99.0
 - D. 10.7.99.128
2. Which of the following is the resident subnet for IP address 192.168.44.97/30?
 - A. 192.168.44.0
 - B. 192.168.44.64
 - C. 192.168.44.96
 - D. 192.168.44.128
3. Which of the following is the subnet broadcast address for the subnet in which IP address 172.31.77.201/27 resides?
 - A. 172.31.201.255
 - B. 172.31.255.255
 - C. 172.31.77.223
 - D. 172.31.77.207

THANK YOU