

IPv4 Subnetting Class C

192.168.8.0 =

11000000.10101000.000

01000.00000000

255.255.255.0. =

11111111.11111111.111

11111.11100000

Networks Needed?

- How many bits do I need to borrow from the host bits? 3

- Combinations:
000, 001, 010,
011, 100, 101, 110, 111
- What is my new
subnet mask (normal
and “/“):
255.255.255.224 or
/27

How many hosts per
network needed? 20
hosts per network

- Determine how
many hosts per
network (32bits -

Subnet Mask bits)

1st Subnet

Network ID

192.168.8.0 =

11000000.10101000.000

01000.00011110

Subnet Mask

255.255.255.224 =

11111111.11111111.111

11111.11100000

Range: 192.168.8.1 -

192.168.8.30

Broadcast ID:

192.168.31

2nd Subnet

Network ID

192.168.8.32 =

11000000.10101000.000

01000.00111111

Subnet Mask

255.255.255.224 =

11111111.11111111.111

11111.11100000

Range 192.168.8.33 -

192.168.8.62

Broadcast ID:

192.168.8.63

3rd Subnet

Network ID

192.168.8.64 =
11000000.10101000.000
01000.01000000

Subnet Mask

255.255.255.224 =
11111111.11111111.111
11111.11100000

Range 192.168.8.65 -
192.168.8.94

Broadcast ID:

192.168.8.95

4th Subnet

Network ID

192.168.8.96 =
11000000.10101000.000
01000.01100000

Subnet Mask

255.255.255.224 =
11111111.11111111.111
11111.11100000

Range 192.168.8.97 -
192.168.8.126

Broadcast ID:
192.168.8.127

5th Subnet
Network ID

192.168.8.128 =
11000000.10101000.000
01000.10000000

Subnet Mask

255.255.255.224 =
11111111.11111111.111
11111.11100000

Range 192.168.8.129 -
192.168.8.158

Broadcast ID:
192.168.8.159

6th Subnet

Network ID

192.168.8.0 =

11000000.10101000.000
01000.000000000

Subnet Mask

255.255.255.0 =

11111111.11111111.111
1111.000000000

Range

Broadcast ID

7th Subnet

Network ID

192.168.8.0 =

11000000.10101000.000
01000.000000000

Subnet Mask

255.255.255.0 =
11111111.11111111.111
1111.00000000

Range

Broadcast ID

8th Subnet

Network ID

192.168.8.0 =
11000000.10101000.000
01000.00000000

Subnet Mask

255.255.255.0 =
11111111.11111111.111
1111.00000000

Range
Broadcast ID