

Total no of IP avaialble = 2^(32 - 25) = 128 IP address

We need to have 4 subnets so we need to brought 2 bits from last octet.

So now we have 4 subnet each 32 IP address.

IP: 192.128.255.0/25

Subnet mask: 255.255.255.128

Network D: (30 hosts)

Network A

N/W ID 1: 192.128.255.32/27

B/W ID 1: 192.128.255.63/27

Subnet mask: 255.255.255.224

N/W ID 3: 192.128.255.0/27

B/W ID 3: 192.168.255.31 /27

Subnet mask: 255.255.255.224

Network B

Network C

N/W ID 4: 192.128.255.96/28

B/W ID 4: 192.128.255.111/28

Subnet Mask: 255.255.255.240

N/W ID 2: 192.128.255.64/27

B/W ID 2: 192.128.255.95/27

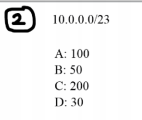
Subnet mask: 255.255.255.224

D -> 30 (32)

A -> 32

B - 15 (32)

C - 10 (16)

1. 

No of IP address available = 2 ^(32 - 23) = 512

IP address: 10.0.0.0/23

Subnet mask: 255.255.254.0 (11111111.11111111.11111110.00000000)

We need to have 380 IP address in our network

C: to have 200 IP address we need to borrow 1 bit from 3rd octet

Network C:

Network A:

N/W ID 2: 10.0.1.0 /25

B/W ID 2: 10.0.1.127/25

Subnet Mask: 255.255.254.128

Network B

N/W ID 3: 10.0.1.128/26

B/W ID 3: 10.0.1.191/26

Subnet Mask: 255.255.254.192

N/W ID 1: 10.0.0.0 /24

B/W ID 1: 10.0.0.255/24

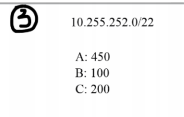
Subnet Mask: 255.255.255.0

Network D:

N/w ID 4: 10.0.1.192/27

B/W ID 4: 10.0.1.224/27

Subnet Mask: 255.255.254.224

1. 

Network : A (510 hosts)

N/w ID 1: 10.255.252.0/23

B/W ID 1: 10.255.253.255/23

Subnet Mask 1: 255.255.254.0

Network : C (256 hosts)

N/w ID 2: 10.255.254.0 /24

B/W ID 2: 10.255.254.255

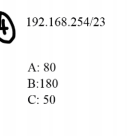
Subnet Mask 2: 255.255.255.0

Network : B (100 hosts)

N/w ID : 10. 255.255.0 /25

B/W ID : 10.255.255.128 /25

Subnet Mask: 255.255.255.128

1. 

11000000.10100100.11111110.00000000

11111111.11111111.11111110.00000000

Network :B (254 hosts)

Network :B (62 hosts)

N/w ID : 192.168.255.128 /26

B/W ID : 192.168.255.191 /26

Subnet Mask: 255.255.255.192

N/w ID : 192.168.254.0 /24

B/W ID : 192.168.254. 255 /24

Subnet Mask: 255.255.255.0

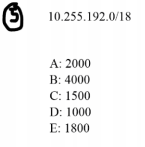
Network :A (126 hosts)

N/w ID : 192.168.255.0 /25

B/W ID : 192.168.255. 127 /26

Subnet Mask: 255.255.255.128

5.



No of IP available = 2^(32 -18) = 16382 available

00001010.11111111.11000000.00000000

11111111.11111111.11000000.00000000

Network : B (4094 hosts)

NETWORK : E (2046 hosts)

N/W ID : 10.255.216.0 /21

B/W ID: 10.255.223.255 /21

Subnet Mask: 255.255.248.0

NETWORK : C (2046 hosts)

N/W ID : 10.255.224.0 /21

B/W ID: 10.255.231.255 /21

Subnet Mask: 255.255.248.0

N/w ID : 10.255.192.0 /20

B/W ID : 10.255.207.255 /20

Subnet Mask: 255.255.240.0

Network : A (2046 hosts)

N/w ID : 10.255.208.0 /21

NETWORK : D (1022 hosts)

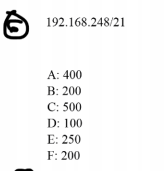
N/W ID : 10.255.232.0 /22

B/W ID: 10.255.235.255 /22

Subnet Mask: 255.255.252.0

B/W ID : 10.255.215.255 /21

Subnet Mask: 255.255.248.0

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11000000.10101000.11111011.00000000

11111111.11111111.11111000.00000000

NETWORK : B (254 hosts)

N/W ID : 192.168.253.0 /24

B/W ID: 192.168.254.255 /24

Subnet Mask: 255.255.255.0

NETWORK : E (254 hosts)

N/W ID : 192.168.252.0 /24

B/W ID: 192.168.252.255 /24

Subnet Mask: 255.255.255.0

IP Address = 2^(32 - 21) = 2048

NETWORK : C (510 hosts)

N/W ID : 192.168.248.0 /23

B/W ID: 192.168.249.255 /23

Subnet Mask: 255.255.254.0

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NETWORK : A (510 hosts

N/W ID : 192.168.250.0 /23

B/W ID: 192.168.251.255 /23

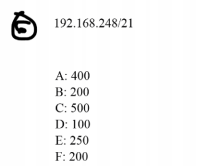
Subnet Mask: 255.255.254.0

NETWORK : F (254 hosts)

N/W ID : 192.168.255.0 /24

B/W ID: 192.168.255.255 /24

Subnet Mask: 255.255.255.0

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11000000.10100100.11111011.00000000

11111111.11111111.11111100.00000000

NETWORK : C (510 hosts)

N/W ID : 192.168.248.0 /23

B/W ID: 192.168.249.255 /23

Subnet Mask: 255.255.252.0

NETWORK : A (510 hosts)

N/W ID : 192.168.250.0 /23

B/W ID: 192.168.251.255 /23

Subnet Mask: 255.255.252.0

NETWORK : E (254 hosts)

N/W ID : 192.168.252.0 /24

B/W ID: 192.168.252.255 /24

Subnet Mask: 255.255.255.0

NETWORK : B (254 hosts)

N/W ID : 192.168.252.0 /24

B/W ID: 192.168.252.255 /24

Subnet Mask: 255.255.255.0

NETWORK : B (254 hosts)

N/W ID : 192.168.253.0 /24

B/W ID: 192.168.253.255 /24

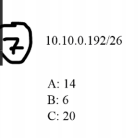
Subnet Mask: 255.255.255.0

NETWORK : D (126hosts)

N/W ID : 192.168.254.0 /25

B/W ID: 192.168.254.127 /25

Subnet Mask: 255.255.255.128

1. 

NETWORK : C (30 hosts)

N/W ID : 10.10.0.192 /27

B/W ID: 10.10.0.223 /27

Subnet Mask: 255.255.255.224

NETWORK : A (14 hosts)

N/W ID : 10.10.0.224 /28

B/W ID: 10.10.0.239 /28

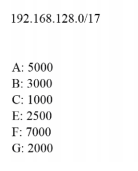
Subnet Mask: 255.255.255.240

NETWORK : B (6 hosts)

N/W ID : 10.10.0.240 /29

B/W ID: 10.10.0.247 /29

Subnet Mask: 255.255.255.248

1. 

NETWORK : E (4096 hosts)

N/W ID : 192.168.208.0 /20

B/W ID: 192.168.223.255 /20

Subnet Mask: 255.255.240.0

NETWORK : F (8190 hosts)

N/W ID : 192.168.128.0 /19

B/W ID: 192.168.159.255 /19

Subnet Mask: 255.255.224.0

NETWORK : A (8190 hosts)

NETWORK : G (2046 hosts)

N/W ID : 192.168.224.0 /21

B/W ID: 192.168.231.255 /21

Subnet Mask: 255.255.248.0

N/W ID : 192.168.160.0 /19

B/W ID: 192.168.191.255 /19

Subnet Mask: 255.255.224.0

NETWORK : B (4094 hosts)

N/W ID : 192.168.192.0 /20

NETWORK : C (1022 hosts)

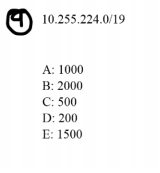
N/W ID : 192.168.232.0 /22

B/W ID: 192.168.235.255 /22

Subnet Mask: 255.255.252.0

B/W ID: 192.168.207.255 /20

Subnet Mask: 255.255.240.0

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NETWORK : C (512 hosts)

N/W ID : 10.255.244.0 /23

B/W ID: 10.255.245.255 /23

Subnet Mask: 255.255.254.0

NETWORK : B (2046 hosts)

N/W ID : 10.255.224.0 /21

B/W ID: 10.255.231.255 /21

Subnet Mask: 255.255.248.0

NETWORK : E (2046 hosts)

N/W ID : 10.255.232.0 /21

NETWORK : D (254 hosts)

N/W ID : 10.255.246.0 /24

B/W ID: 10.255.246.255

Subnet Mask: 255.255.255.0

B/W ID: 10.255.239.255 /21

Subnet Mask: 255.255.248.0

NETWORK : A (1022 hosts)

N/W ID : 10.255.240.0 /22

B/W ID: 10.255.243.255 /22

Subnet Mask: 255.255.252.0