1

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192.168.1.0/24, n=4

C class

2 power X = 4 → X = 2

before: Net id 24 bit, host id 8 bit, SM 255.255.255.0

after: Net id 24+2 bit, host id 8-2 bit, SM 11111111.11111111.11111111.11000000

                                                     255   255   255   192

1

Net ID: 192.168.1.0/26

192.168.1.1 ~ 192.168.1.62

BC IP: 192.168.1.63

2

Net ID: 192.168.1.64

192.168.1.65 ~ 192.168.1.126

BC IP: 192.168.1.127

3

Net ID: 192.168.1.128

192.168.1.129 ~ 192.168.1.190

BC IP: 192.168.1.191

4

Net ID: 192.168.1.192

192.168.1.193 ~ 192.168.1.254

BC IP: 192.168.1.255

2

172.16.0.0/16, n = 16

B class

2 power X = 16 → X = 4

before: Net id 16 bit, host id 16 bit, SM 255.255.0.0

after: Net id 16+4 bit, host id 16-4 bit, SM 11111111.11111111.11110000.00000000

                                                  255   255   240   0

1

Net ID: 172.16.0.0/20

172.16.0.1 ~ 172.16.15.254

BC IP: 172.16.15.255

2

Net ID: 172.16.16.0

172.16.16.1 ~ 172.16.31.254

BC IP: 172.16.31.255

3

Net ID: 172.16.32.0

172.16.32.1 ~ 172.16.47.254

BC IP: 172.16.47.255

4

Net ID: 172.16.48.0

172.16.48.1 ~ 172.16.63.254

BC IP: 172.16.63.255

5

Net ID: 172.16.64.0

172.16.64.1 ~ 172.16.79.254

BC IP: 172.16.79.255

3

10.0.0.0/8, n = 64

A class

2 power X = 64 → X = 6

before: Net id 8 bit, host id 24 bit, SM 255.0.0.0

after: Net id 8+6 bit, host id 24-6 bit, SM 11111111.11111100.00000000.00000000

                                               255   252   0   0

1

Net ID: 10.0.0.0/14

10.0.0.1 ~ 10.3.255.254

BC IP: 10.3.255.255

2

Net ID: 10.4.0.0

10.4.0.1 ~ 10.7.255.254

BC IP: 10.7.255.255

3

Net ID: 10.8.0.0

10.8.0.1 ~ 10.11.255.254

BC IP: 10.11.255.255

4

Net ID: 10.12.0.0

10.12.0.1 ~ 10.15.255.254

BC IP: 10.15.255.255

5

Net ID: 10.16.0.0

10.16.0.1 ~ 10.19.255.254

BC IP: 10.19.255.255

4

192.168.10.0/24, n = 8

C class

2 power X = 8 → X = 3

before: Net id 24 bit, host id 8 bit, SM 255.255.255.0

after: Net id 24+3 bit, host id 8-3 bit, SM 11111111.11111111.11111111.11100000

                                   255   255   255   224

1

Net ID: 192.168.10.0

192.168.10.1 ~ 192.168.10.30

BC IP: 192.168.10.31

2

Net ID: 192.168.10.32

192.168.10.33 ~ 192.168.10.62

BC IP: 192.168.10.63

3

Net ID: 192.168.10.64

192.168.10.65 ~ 192.168.10.94

BC IP: 192.168.10.95

4

Net ID: 192.168.10.96

192.168.10.97 ~ 192.168.10.126

BC IP: 192.168.10.127

5

Net ID: 192.168.10.128

192.168.10.129 ~ 192.168.10.158

BC IP: 192.168.10.159

5

172.31.0.0/16, n = 128

B class

2 power X = 128 $\rightarrow$ X = 7

before: Net id 16 bit, host id 16 bit, SM 255.255.0.0

after: Net id 16+7 bit, host id 16-7 bit, SM 11111111.11111111.11111110.00000000

                                                             255   255   254   0

1

Net ID: 172.31.0.0

172.31.0.1 ~ 172.31.1.254

BC IP: 172.31.1.255

2

Net ID: 172.31.2.0

172.31.2.1 ~ 172.31.3.254

BC IP: 172.31.3.255

3

Net ID: 172.31.4.0

172.31.4.1 ~ 172.31.5.254

BC IP: 172.31.5.255

4

Net ID: 172.31.6.0

172.31.6.1 ~ 172.31.7.254

BC IP: 172.31.7.255

5

Net ID: 172.31.8.0

172.31.8.1 ~ 172.31.9.254

BC IP: 172.31.9.255

10.10.0.0/16, n = 1000

B class

2 power X = 1024 → X = 10

before: Net id 16 bit, host id 16 bit, SM 255.255.0.0

after: Net id 16+10 bit, host id 16-10 bit, SM 11111111.11111111.11111111.11000000

                                                        255   255   255   192

1

Net ID: 10.10.0.0

10.10.0.1 ~ 10.10.0.62

BC IP: 10.10.0.63

2

Net ID: 10.10.0.64

10.10.0.65 ~ 10.10.0.126

BC IP: 10.10.0.127

3

Net ID: 10.10.0.128

10.10.0.129 ~ 10.10.0.190

BC IP: 10.10.0.191

4

Net ID: 10.10.0.192

10.10.0.193 ~ 10.10.0.254

BC IP: 10.10.0.255

5

Net ID: 10.10.1.0

10.10.1.1 ~ 10.10.0.62

BC IP: 10.10.1.63

192.168.0.0/16, n = 1024

B class

2 power X = 1024 → X = 10

before: Net id 16 bit, host id 16 bit, SM 255.255.0.0

after: Net id 16+10 bit, host id 16-10 bit, SM 11111111.11111111.11111111.11000000

255   255   255   192

1

Net ID: 192.168.0.0

192.168.0.1 ~ 192.168.0.62

BC IP: 192.168.0.63

2

Net ID: 192.168.0.64

192.168.0.65 ~ 192.168.0.126

BC IP: 192.168.0.127

3

Net ID: 192.168.0.128

192.168.0.129 ~ 192.168.0.190

BC IP: 192.168.0.191

4

Net ID: 192.168.0.192

192.168.0.193 ~ 192.168.0.254

BC IP: 192.168.0.255

5

Net ID: 192.168.1.0

192.168.1.1 ~ 192.168.0.62

BC IP: 192.168.1.63