

CIDR Conversion Table

| CIDR Length | Mask | # Networks | # Hosts |
|-------------|-----------------|------------|---------------|
| /1 | 128.0.0.0 | 128 A | 2,147,483,392 |
| /2 | 192.0.0.0 | 64 A | 1,073,741,696 |
| /3 | 224.0.0.0 | 32 A | 536,870,848 |
| /4 | 240.0.0.0 | 16 A | 268,435,424 |
| /5 | 248.0.0.0 | 8 A | 134,217,712 |
| /6 | 252.0.0.0 | 4 A | 67,108,856 |
| /7 | 254.0.0.0 | 2 A | 33,554,428 |
| /8 | 255.0.0.0 | 1 A | 16,777,214 |
| /9 | 255.128.0.0 | 128 B | 8,388,352 |
| /10 | 255.192.0.0 | 64 B | 4,194,176 |
| /11 | 255.224.0.0 | 32 B | 2,097,088 |
| /12 | 255.240.0.0 | 16 B | 1,048,544 |
| /13 | 255.248.0.0 | 8 B | 524,272 |
| /14 | 255.252.0.0 | 4 B | 262,136 |
| /15 | 255.254.0.0 | 2 B | 131,068 |
| /16 | 255.255.0.0 | 1 B | 65,024 |
| /17 | 255.255.128.0 | 128 C | 32,512 |
| /18 | 255.255.192.0 | 64 C | 16,256 |
| /19 | 255.255.224.0 | 32 C | 8,128 |
| /20 | 255.255.240.0 | 16 C | 4,064 |
| /21 | 255.255.248.0 | 8 C | 2,032 |
| /22 | 255.255.252.0 | 4 C | 1,016 |
| /23 | 255.255.254.0 | 2 C | 508 |
| /24 | 255.255.255.0 | 1 C | 254 |
| /25 | 255.255.255.128 | 2 subnets | 124 |
| /26 | 255.255.255.192 | 4 subnets | 62 |
| /27 | 255.255.255.224 | 8 subnets | 30 |
| /28 | 255.255.255.240 | 16 subnets | 14 |
| /29 | 255.255.255.248 | 32 subnets | 6 |
| /30 | 255.255.255.252 | 64 subnets | 2 |
| /31 | 255.255.255.254 | none | none |
| /32 | 255.255.255.255 | 1/256 C | 1 |

A network is called a *supernet* when the prefix boundary contains fewer bits than the network's natural (i.e. classful) mask. A network is called a *subnet* when the prefix boundary contains more bits than the network's natural mask.

Examples

209.60.128.0 is a class C network address with a natural mask of /24.

209.60.128.0 /22 is a supernet which yields:

209.60.128.0 /24

209.60.129.0 /24

209.60.130.0 /24

209.60.131.0 /24

192.0.0.0 /25

Subnet Host Range

0 192.0.0.1 - 192.0.0.126

1 192.0.0.129 - 192.0.0.254

192.0.0.0 /26

Subnet Host Range

0 192.0.0.1 - 192.0.0.62

1 192.0.0.65 - 192.0.0.126

2 192.0.0.129 - 192.0.0.190

3 192.0.0.193 - 192.0.0.254

192.0.0.0 /27

Subnet Host Range

0 192.0.0.1 - 192.0.0.30

1 192.0.0.33 - 192.0.0.62

2 192.0.0.65 - 192.0.0.94

3 192.0.0.97 - 192.0.0.126

4 192.0.0.129 - 192.0.0.158

5 192.0.0.161 - 192.0.0.190

6 192.0.0.193 - 192.0.0.222

7 192.0.0.225 - 192.0.0.254

Reserved Network Numbers

| Class | Start | End | # Hosts | Comment |
|-------|-------------|-----------------|------------|----------------------------------------|
| A | 10.0.0.0 | 10.255.255.255 | 16,777,216 | a single Class A network number |
| B | 172.16.0.0 | 172.31.255.255 | 1,048,544 | 16 contiguous Class B network numbers |
| C | 192.168.0.0 | 192.168.255.255 | 65,534 | 256 contiguous Class C network numbers |

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