

Subnetting

Prefix Length Slash Notation (CIDR)	Addresses (Total IPs)	Max Available Hosts (Usable IPs)	Subnet Length	Subnet Mask
/32	1	1	0	255.255.255.255
/31	2	0	1	255.255.255.254
/30	4	2	2	255.255.255.252
/29	8	6	3	255.255.255.248
/28	16	14	4	255.255.255.240
/27	32	30	5	255.255.255.224
/26	64	62	6	255.255.255.192
/25	128	126	7	255.255.255.128
/24	256	254	8	255.255.255.0
/23	512	510	9	255.255.254.0
/22	1024	1022	10	255.255.252.0
/21	2048	2046	11	255.255.248.0
/20	4096	4094	12	255.255.240.0
/19	8192	8190	13	255.255.224.0
/18	16384	16382	14	255.255.192.0
/17	32768	32766	15	255.255.128.0
/16	65536	65534	16	255.255.0.0
/15	131072	131070	17	255.254.0.0
/14	262144	262142	18	255.252.0.0
/13	524288	524286	19	255.248.0.0
/12	1048576	1048574	20	255.240.0.0
/11	2097152	2097150	21	255.224.0.0
/10	4194304	4194302	22	255.192.0.0
/9	8388608	8388606	23	255.128.0.0
/8	16777216	16777214	24	255.0.0.0
/7	33554432	33554430	25	254.0.0.0
/6	67108864	67108862	26	252.0.0.0
/5	134217728	134217726	27	248.0.0.0
/4	268435456	268435454	28	240.0.0.0
/3	536870912	536870910	29	224.0.0.0
/2	1073741824	1073741822	30	192.0.0.0
/1	2147483648	2147483646	31	128.0.0.0
/0	4294967296	4294967294	32	0.0.0.0

Classful IPv4 Addresses	
Class A	0.0.0.0 – 127.255.255.255
Class B	128.0.0.0 – 191.255.255.255
Class C	192.0.0.0 – 223.255.255.255
Class D	224.0.0.0 – 239.255.255.255
Class E	240.0.0.0 – 255.255.255.255

Private IPv4 Addresses	
10.0.0.0 – 10.255.255.255	
172.16.0.0 – 172.31.255.255	
192.168.0.0 – 192.168.255.255	

Special IPv4 Addresses	
Local Host	127.0.0.0 – 127.255.255.255
APIPA	169.254.0.0 – 169.254.255.255

Bogon IPv4 Addresses	
This network	0.0.0.0/8
Private IPv4 Block	10.0.0.0/8
Carrier-grade NAT	100.64.0.0/10
Loopback	127.0.0.0/8
Name collision occurrence	127.0.53.53
Link local	169.254.0.0/16
Private IPv4 Block	172.16.0.0/12
IETF Assignments	192.0.0.0/24
TEST-NET-1	192.0.2.0/24
Private IPv4 Block	192.168.0.0/16
Benchmark testing	198.18.0.0/15
TEST-NET-2	198.51.100.0/24
TEST-NET-3	203.0.113.0/24
Multicast	224.0.0.0/4
Reserved	240.0.0.0/4
Limited broadcast	255.255.255.255/32

