

IP ADDRESS BLOCK SIZE EQUIVALENTS

in Classful Addressing, IPv4, and IPv6

CIDR prefixes in blue boxes are common distribution sizes.



CIDR	Classful <i>unused since 1993</i>	IPv4 <i>deployed in 1981</i>	IPv6 (rounded above /78) <i>deployed in 1999</i>
/1		2 ^{^31} 2,147,483,648	2 ^{^127} 170,141,183,460,469,000,000,000,000,000,000,000,000
/2		2 ^{^30} 1,073,741,824	2 ^{^126} 85,070,591,730,234,700,000,000,000,000,000,000,000
/3		2 ^{^29} 536,870,912	2 ^{^125} 42,535,295,865,117,400,000,000,000,000,000,000,000
/4		2 ^{^28} 268,435,456	2 ^{^124} 21,267,647,932,558,700,000,000,000,000,000,000,000
/5		2 ^{^27} 134,217,728	2 ^{^123} 10,633,823,966,279,300,000,000,000,000,000,000,000
/6		2 ^{^26} 67,108,864	2 ^{^122} 5,316,911,983,139,670,000,000,000,000,000,000,000
/7		2 ^{^25} 33,554,432	2 ^{^121} 2,658,455,991,569,830,000,000,000,000,000,000,000
/8	A 16,777,216	2 ^{^24} 16,777,216	2 ^{^120} 1,329,227,995,784,920,000,000,000,000,000,000,000
/9		2 ^{^23} 8,388,608	2 ^{^119} 664,613,997,892,459,000,000,000,000,000,000,000
/10		2 ^{^22} 4,194,304	2 ^{^118} 332,306,998,946,229,000,000,000,000,000,000,000
/11		2 ^{^21} 2,097,152	2 ^{^117} 166,153,499,473,115,000,000,000,000,000,000,000
/12		2 ^{^20} 1,048,576	2 ^{^116} 83,076,749,736,557,300,000,000,000,000,000,000
/13		2 ^{^19} 524,288	2 ^{^115} 41,538,374,868,278,700,000,000,000,000,000,000
/14		2 ^{^18} 262,144	2 ^{^114} 20,769,187,434,139,300,000,000,000,000,000,000
/15		2 ^{^17} 131,072	2 ^{^113} 10,384,593,717,069,700,000,000,000,000,000,000
/16	B 65,536	2 ^{^16} 65,536	2 ^{^112} 5,192,296,858,534,830,000,000,000,000,000,000
/17		2 ^{^15} 32,768	2 ^{^111} 2,596,148,429,267,420,000,000,000,000,000,000
/18		2 ^{^14} 16,384	2 ^{^110} 1,298,074,214,633,710,000,000,000,000,000,000
/19		2 ^{^13} 8,192	2 ^{^109} 649,037,107,316,854,000,000,000,000,000,000
/20		2 ^{^12} 4,096	2 ^{^108} 324,518,553,658,427,000,000,000,000,000,000
/21		2 ^{^11} 2,048	2 ^{^107} 162,259,276,829,213,000,000,000,000,000,000
/22		2 ^{^10} 1,024	2 ^{^106} 81,129,638,414,606,800,000,000,000,000,000
/23		2 ^{^9} 512	2 ^{^105} 40,564,819,207,303,400,000,000,000,000,000
/24	C 256	2 ^{^8} 256	2 ^{^104} 20,282,409,603,651,700,000,000,000,000,000
/25		2 ^{^7} 128	2 ^{^103} 10,141,204,801,825,800,000,000,000,000,000
/26		2 ^{^6} 64	2 ^{^102} 5,070,602,400,912,920,000,000,000,000,000
/27		2 ^{^5} 32	2 ^{^101} 2,535,301,200,456,460,000,000,000,000,000
/28		2 ^{^4} 16	2 ^{^100} 1,267,650,600,228,230,000,000,000,000,000
/29		2 ^{^3} 8	2 ^{^99} 633,825,300,114,115,000,000,000,000,000
/30		2 ^{^2} 4	2 ^{^98} 316,912,650,057,058,000,000,000,000,000
/31		2 ^{^1} 2	2 ^{^97} 158,456,325,028,529,000,000,000,000,000
/32		2 ^{^0} 1	2 ^{^96} 79,228,162,514,264,500,000,000,000,000
/33			2 ^{^95} 39,614,081,257,132,200,000,000,000,000
/34			2 ^{^94} 19,807,040,628,566,100,000,000,000,000
/35			2 ^{^93} 9,903,520,314,283,050,000,000,000,000
/36			2 ^{^92} 4,951,760,157,141,520,000,000,000,000
/37			2 ^{^91} 2,475,880,078,570,760,000,000,000,000
/38			2 ^{^90} 1,237,940,039,285,380,000,000,000,000
/39			2 ^{^89} 618,970,019,642,690,000,000,000,000

CIDR	Classful <i>unused since 1993</i>	IPv4 <i>deployed in 1981</i>	IPv6 (rounded above /78) <i>deployed in 1999</i>	
/40			2 ^{^88}	309,485,009,821,345,000,000,000,000
/41			2 ^{^87}	154,742,504,910,673,000,000,000,000
/42			2 ^{^86}	77,371,252,455,336,300,000,000,000
/43			2 ^{^85}	38,685,626,227,668,100,000,000,000
/44			2 ^{^84}	19,342,813,113,834,100,000,000,000
/45			2 ^{^83}	9,671,406,556,917,040,000,000,000
/46			2 ^{^82}	4,835,703,278,458,520,000,000,000
/47			2 ^{^81}	2,417,851,639,229,260,000,000,000
/48			2 ^{^80}	1,208,925,819,614,630,000,000,000
/49			2 ^{^79}	604,462,909,807,315,000,000,000
/50			2 ^{^78}	302,231,454,903,657,000,000,000
/51			2 ^{^77}	151,115,727,451,829,000,000,000
/52			2 ^{^76}	75,557,863,725,914,400,000,000
/53			2 ^{^75}	37,778,931,862,957,200,000,000
/54			2 ^{^74}	18,889,465,931,478,600,000,000
/55			2 ^{^73}	9,444,732,965,739,290,000,000
/56			2 ^{^72}	4,722,366,482,869,650,000,000
/57			2 ^{^71}	2,361,183,241,434,820,000,000
/58			2 ^{^70}	1,180,591,620,717,410,000,000
/59			2 ^{^69}	590,295,810,358,706,000,000
/60			2 ^{^68}	295,147,905,179,353,000,000
/61			2 ^{^67}	147,573,952,589,676,000,000
/62			2 ^{^66}	73,786,976,294,838,200,000
/63			2 ^{^65}	36,893,488,147,419,100,000
/64			2 ^{^64}	18,446,744,073,709,500,000
/65			2 ^{^63}	9,223,372,036,854,780,000
/66			2 ^{^62}	4,611,686,018,427,390,000
/67			2 ^{^61}	2,305,843,009,213,690,000
/68			2 ^{^60}	1,152,921,504,606,850,000
/69			2 ^{^59}	576,460,752,303,424,000
/70			2 ^{^58}	288,230,376,151,712,000
/71			2 ^{^57}	144,115,188,075,856,000
/72			2 ^{^56}	72,057,594,037,927,900
/73			2 ^{^55}	36,028,797,018,963,000
/74			2 ^{^54}	18,014,398,509,481,000
/75			2 ^{^53}	9,007,199,254,740,990
/76			2 ^{^52}	4,503,599,627,370,400
/77			2 ^{^51}	2,251,799,813,685,250
/78			2 ^{^50}	1,125,899,906,842,620
/79			2 ^{^49}	562,949,953,421,312
/80			2 ^{^48}	281,474,976,710,656
/81			2 ^{^47}	140,737,488,355,328
/82			2 ^{^46}	70,368,744,177,664
/83			2 ^{^45}	35,184,372,088,832
/84			2 ^{^44}	17,592,186,044,416
/85			2 ^{^43}	8,796,093,022,208

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/86			2 ⁴²	4,398,046,511,104
/87			2 ⁴¹	2,199,023,255,552
/88			2 ⁴⁰	1,099,511,627,776
/89			2 ³⁹	549,755,813,888
/90			2 ³⁸	274,877,906,944
/91			2 ³⁷	137,438,953,472
/92			2 ³⁶	68,719,476,736
/93			2 ³⁵	34,359,738,368
/94			2 ³⁴	17,179,869,184
/95			2 ³³	8,589,934,592
/96			2 ³²	4,294,967,296
/97			2 ³¹	2,147,483,648
/98			2 ³⁰	1,073,741,824
/99			2 ²⁹	536,870,912
/100			2 ²⁸	268,435,456
/101			2 ²⁷	134,217,728
/102			2 ²⁶	67,108,864
/103			2 ²⁵	33,554,432
/104			2 ²⁴	16,777,216
/105			2 ²³	8,388,608
/106			2 ²²	4,194,304
/107			2 ²¹	2,097,152
/108			2 ²⁰	1,048,576
/109			2 ¹⁹	524,288
/110			2 ¹⁸	262,144
/111			2 ¹⁷	131,072
/112			2 ¹⁶	65,536
/113			2 ¹⁵	32,768
/114			2 ¹⁴	16,384
/115			2 ¹³	8,192
/116			2 ¹²	4,096
/117			2 ¹¹	2,048
/118			2 ¹⁰	1,024
/119			2 ⁹	512
/120			2 ⁸	256
/121			2 ⁷	128
/122			2 ⁶	64
/123			2 ⁵	32
/124			2 ⁴	16
/125			2 ³	8
/126			2 ²	4
/127			2 ¹	2
/128			2 ⁰	1