

Powers of Two

2 ¹⁶	2 ¹⁵	2 ¹⁴	2 ¹³	2 ¹²	2 ¹¹	2 ¹⁰	2 ⁹	2 ⁸	2 ⁷	2 ⁶	2 ⁵	2 ⁴	2 ³	2 ²	2 ¹	2 ⁰
65536	32768	16384	8192	4096	2048	1024	512	256	128	64	32	16	8	4	2	1

NetID:	•	•	•
SM:	•	•	•

needs:	SN:	H:
new SM:	•	•
yield:	SN:	H:
SNID incr value:		

SNID 0:	•	•	•
1st host:	•	•	•
last host:	•	•	•
Bkst:	•	•	•

SNID 1:	•	•	•
1st host:	•	•	•
last host:	•	•	•
Bkst:	•	•	•

SNID 2:	•	•	•
1st host:	•	•	•
last host:	•	•	•
Bkst:	•	•	•

Subnet Mask	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	octet	0
bit patterns	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		128
and decimal	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		192
equivalents	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0		224
	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0		240
	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0		248
	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0		252
	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0		254
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		255

Max decimal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
value of	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		1
binary	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1		3
digit sets*	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1		7
	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1		15
	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1		31
	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1		63
	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		127
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		255

*Note value is one less than next power of two

Binary - Decimal - Hexadecimal Equivalents

128	64	32	16	8	4	2	1	dec	hex
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1	1	1
0	0	0	0	0	0	1	0	2	2
0	0	0	0	0	0	1	1	3	3
0	0	0	0	0	1	0	0	4	4
0	0	0	0	0	1	1	0	5	5
0	0	0	0	0	1	1	1	6	6
0	0	0	0	0	1	1	1	7	7
0	0	0	0	1	0	0	0	8	8
0	0	0	0	1	0	0	1	9	9
0	0	0	0	1	0	1	0	10	A
0	0	0	0	1	0	1	1	11	B
0	0	0	0	1	1	0	0	12	C
0	0	0	0	1	1	0	1	13	D
0	0	0	0	1	1	1	0	14	E
0	0	0	0	1	1	1	1	15	F
0	0	0	1	0	0	0	0	16	10
0	0	0	1	0	0	0	1	17	11
0	0	0	1	0	0	1	0	18	12
0	0	0	1	0	0	1	1	19	13
0	0	0	1	0	1	0	0	20	14
0	0	0	1	0	1	0	1	21	15
0	0	0	1	0	1	1	0	22	16
0	0	0	1	0	1	1	1	23	17
0	0	0	1	1	0	0	0	24	18
0	0	0	1	1	0	0	1	25	19
0	0	0	1	1	0	1	0	26	1A
0	0	0	1	1	0	1	1	27	1B
0	0	0	1	1	1	0	0	28	1C
0	0	0	1	1	1	0	1	29	1D
0	0	0	1	1	1	1	0	30	1E
0	0	0	1	1	1	1	1	31	1F

128	64	32	16	8	4	2	1	dec	hex
0	0	1	0	0	0	0	0	32	20
0	0	1	0	0	0	0	1	33	21
0	0	1	0	0	0	1	0	34	22
0	0	1	0	0	0	1	1	35	23
0	0	1	0	0	1	0	0	36	24
0	0	1	0	0	1	0	1	37	25
0	0	1	0	0	1	1	0	38	26
0	0	1	0	0	1	1	1	39	27
0	0	1	0	1	0	0	0	40	28
0	0	1	0	1	0	0	1	41	29
0	0	1	0	1	0	1	0	42	2A
0	0	1	0	1	0	1	1	43	2B
0	0	1	0	1	1	0	0	44	2C
0	0	1	0	1	1	0	1	45	2D
0	0	1	0	1	1	1	0	46	2E
0	0	1	0	1	1	1	1	47	2F
0	0	1	1	0	0	0	0	48	30
0	0	1	1	0	0	0	1	49	31
0	0	1	1	0	0	1	0	50	32
0	0	1	1	0	0	1	1	51	33
0	0	1	1	0	1	0	0	52	34
0	0	1	1	0	1	0	1	53	35
0	0	1	1	0	1	1	0	54	36
0	0	1	1	0	1	1	1	55	37
0	0	1	1	1	0	0	0	56	38
0	0	1	1	1	0	0	1	57	39
0	0	1	1	1	0	1	0	58	3A
0	0	1	1	1	0	1	1	59	3B
0	0	1	1	1	1	0	0	60	3C
0	0	1	1	1	1	0	1	61	3D
0	0	1	1	1	1	1	0	62	3E
0	0	1	1	1	1	1	1	63	3F

128	64	32	16	8	4	2	1	dec	hex
0	1	0	0	0	0	0	0	64	40
0	1	0	0	0	0	0	1	65	41
0	1	0	0	0	0	1	0	66	42
0	1	0	0	0	0	1	1	67	43
0	1	0	0	0	1	0	0	68	44
0	1	0	0	0	1	0	1	69	45
0	1	0	0	0	1	1	0	70	46
0	1	0	0	0	1	1	1	71	47
0	1	0	0	1	0	0	0	72	48
0	1	0	0	1	0	0	1	73	49
0	1	0	0	1	0	1	0	74	4A
0	1	0	0	1	0	1	1	75	4B
0	1	0	0	1	1	0	0	76	4C
0	1	0	0	1	1	0	1	77	4D
0	1	0	0	1	1	1	0	78	4E
0	1	0	0	1	1	1	1	79	4F
0	1	0	1	0	0	0	0	80	50
0	1	0	1	0	0	0	1	81	51
0	1	0	1	0	0	1	0	82	52
0	1	0	1	0	0	1	1	83	53
0	1	0	1	0	1	0	0	84	54
0	1	0	1	0	1	0	1	85	55
0	1	0	1	0	1	1	0	86	56
0	1	0	1	0	1	1	1	87	57
0	1	0	1	1	0	0	0	88	58
0	1	0	1	1	0	0	1	89	59
0	1	0	1	1	0	1	0	90	5A
0	1	0	1	1	0	1	1	91	5B
0	1	0	1	1	1	0	0	92	5C
0	1	0	1	1	1	0	1	93	5D
0	1	0	1	1	1	1	0	94	5E
0	1	0	1	1	1	1	1	95	5F