

## Options (#1dynamic allocation of used byte range) (#2 is static... which is added as the X.1 comments)

1. Simply carve OUT the space needed for the uuid range.[1]
2. OR use/reserve the LAST 16 BYTES; being 4-12 to ensure FULL 64 bit indexing...
3. RANDOMIZE (as it currently does) the Non-needed characters
4. It would be 8-4-4 if 1.1 is used; else it's dynamically calculated
5. Create a string, jam the n+1 looping/incrementing lower half
6. Jam the two components together
7. NO REAL verification of uniqueness is needed, BECAUSE the reserved portion is the indexing/primary key

### Note 1

Given UUID's are: 8-4-4-4-12 for a total of 36 characters – 32 hexadecimal characters and 4 hyphens (wikipedia) 12 - F's == 281,474,976,710,655 (or  $12 \times 4 = 48$ ;  $2^{48}$ )

Byte	Bit	Int
1	4	16
2	8	256
3	12	4096
4	16	65536
5	20	1048576
6	24	16777216
7	28	268435456
8	32	4294967296
9	36	68719476736
10	40	1099511627776
11	44	17592186044416
12	48	281474976710656
13	52	4.5036E+15
14	56	7.20576E+16
15	60	1.15292E+18
16	64	1.84467E+19