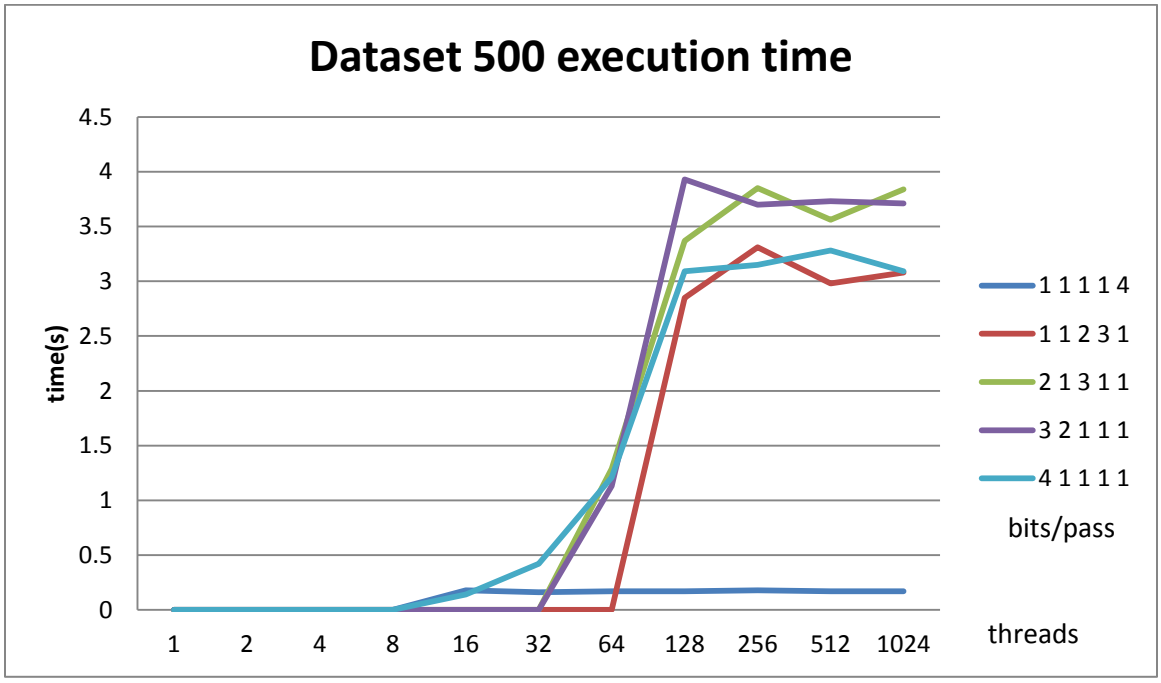
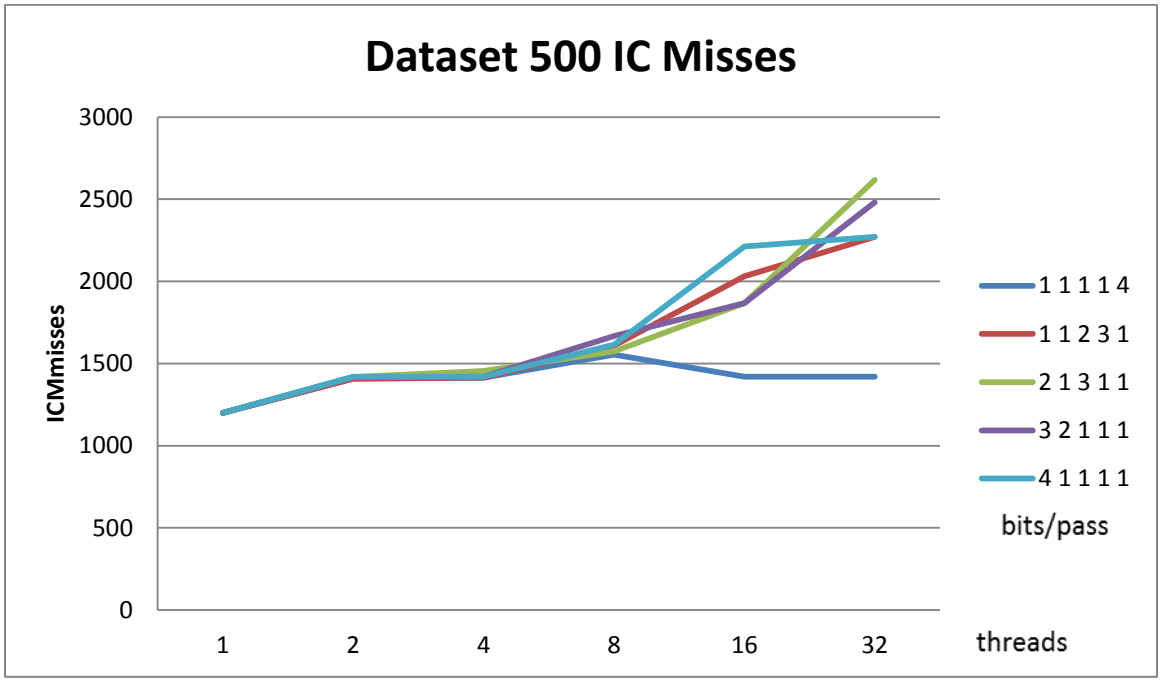
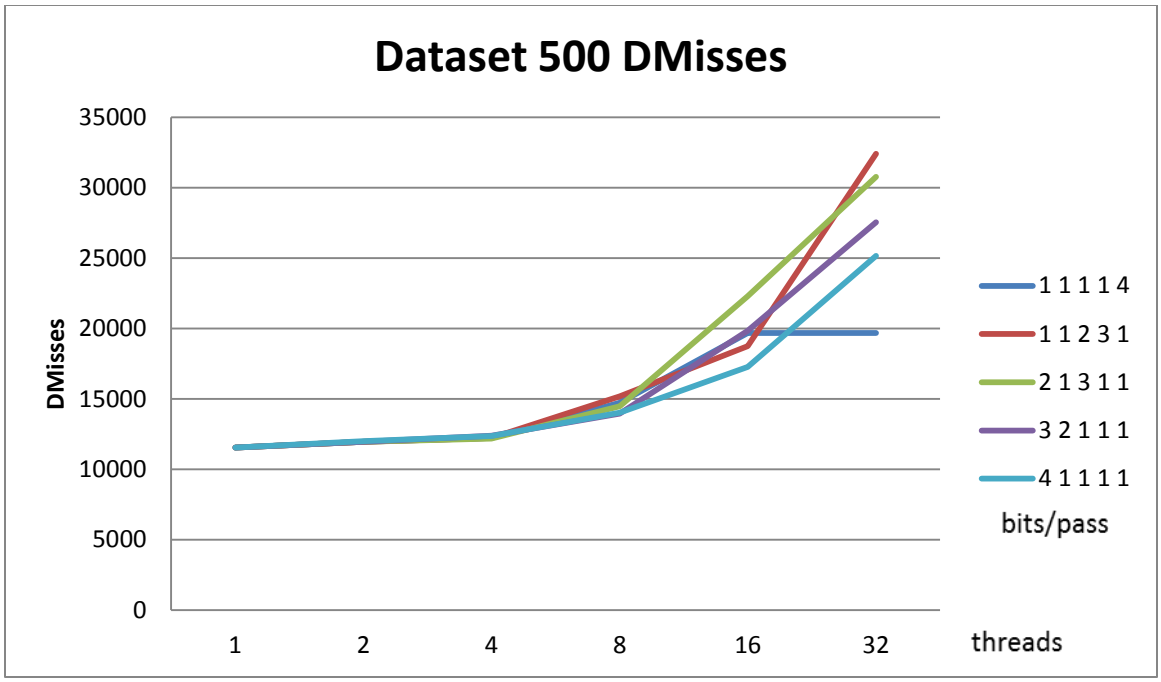
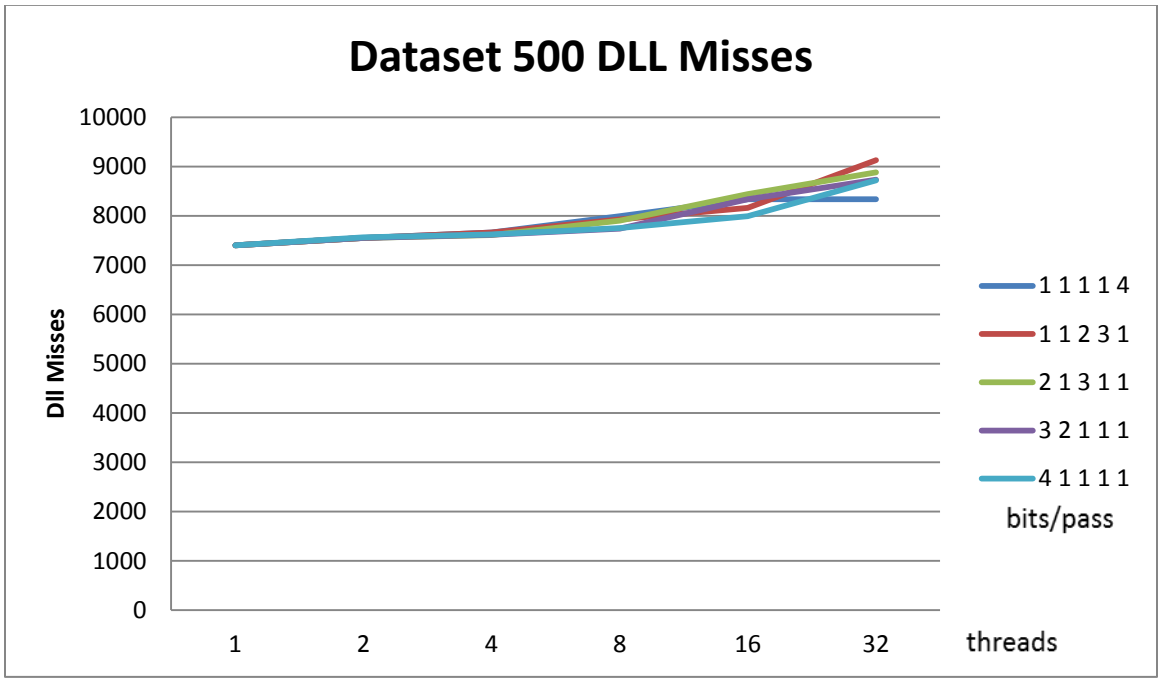
Dataset 500, parallelization only, no affinity ----------

NOTE: for bits per pass ending in 4 or 7, they never reach more than 16 threads, no matter what – that explains the steady behavior in some charts



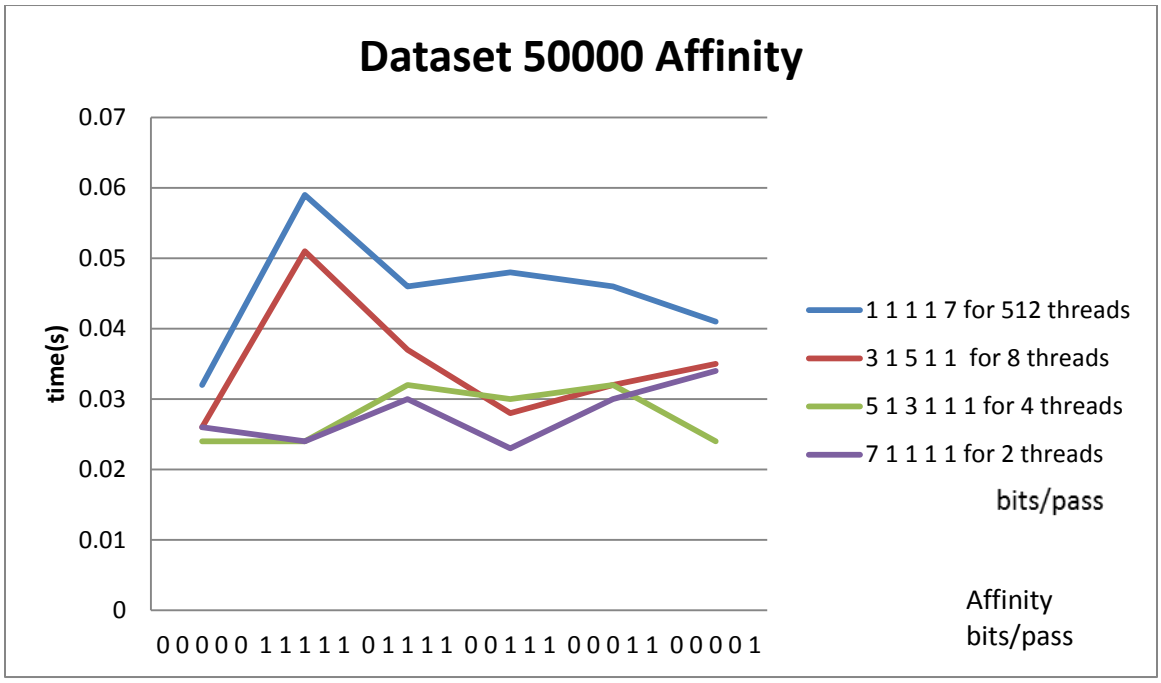


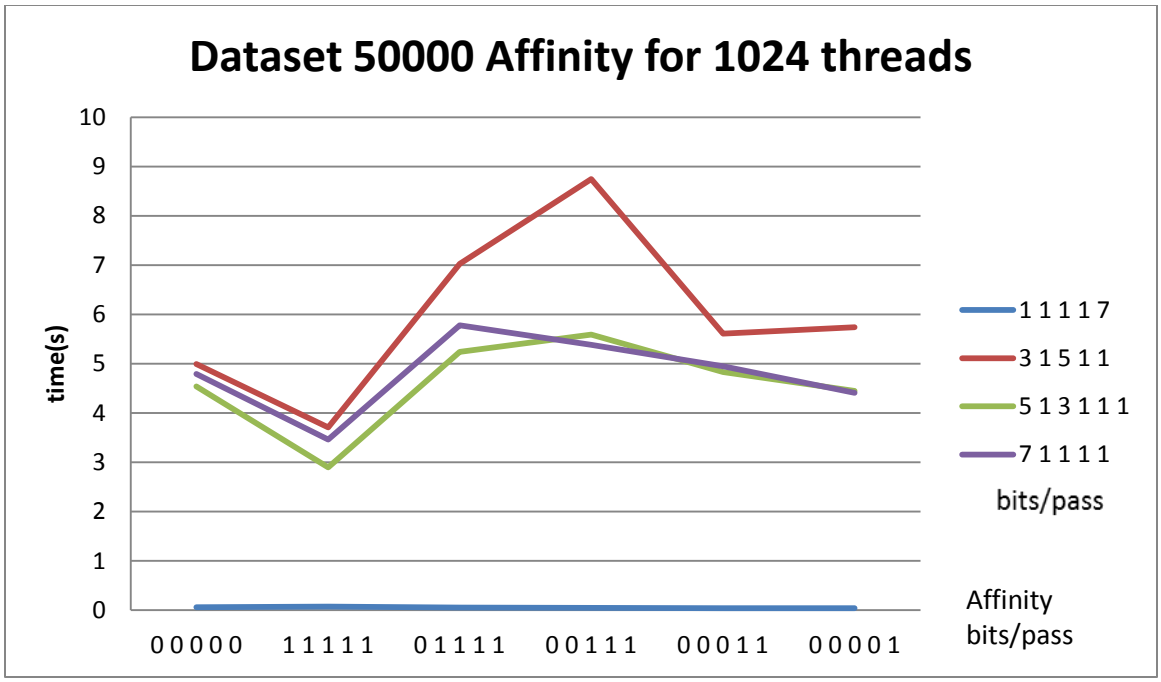


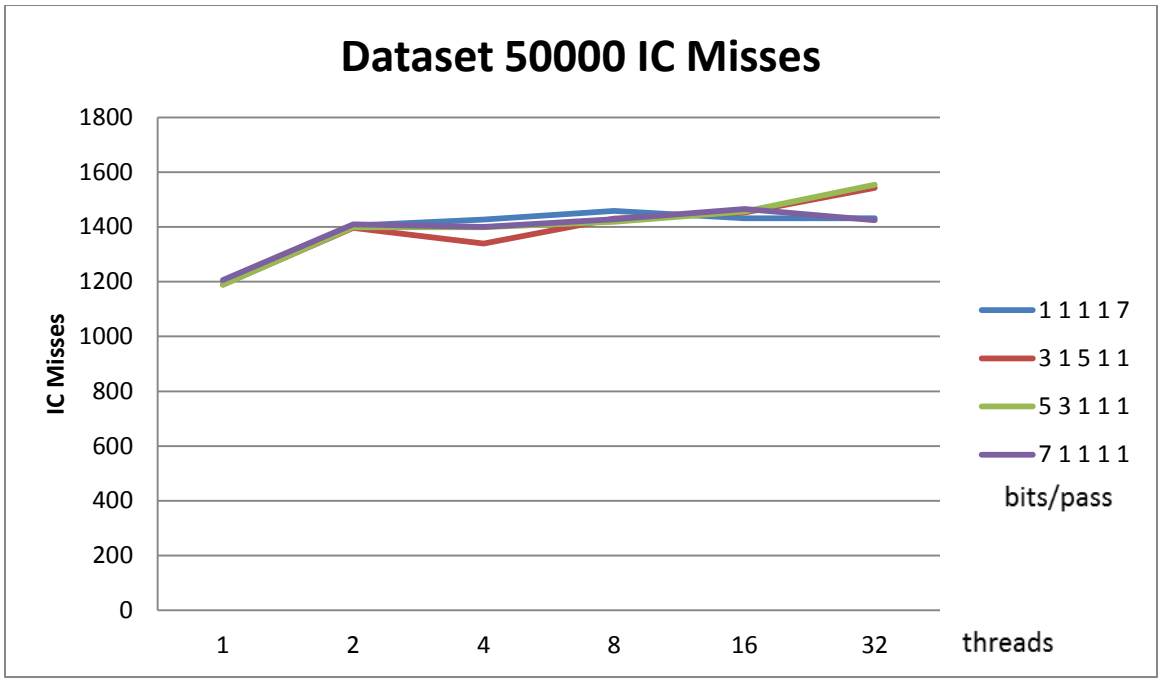


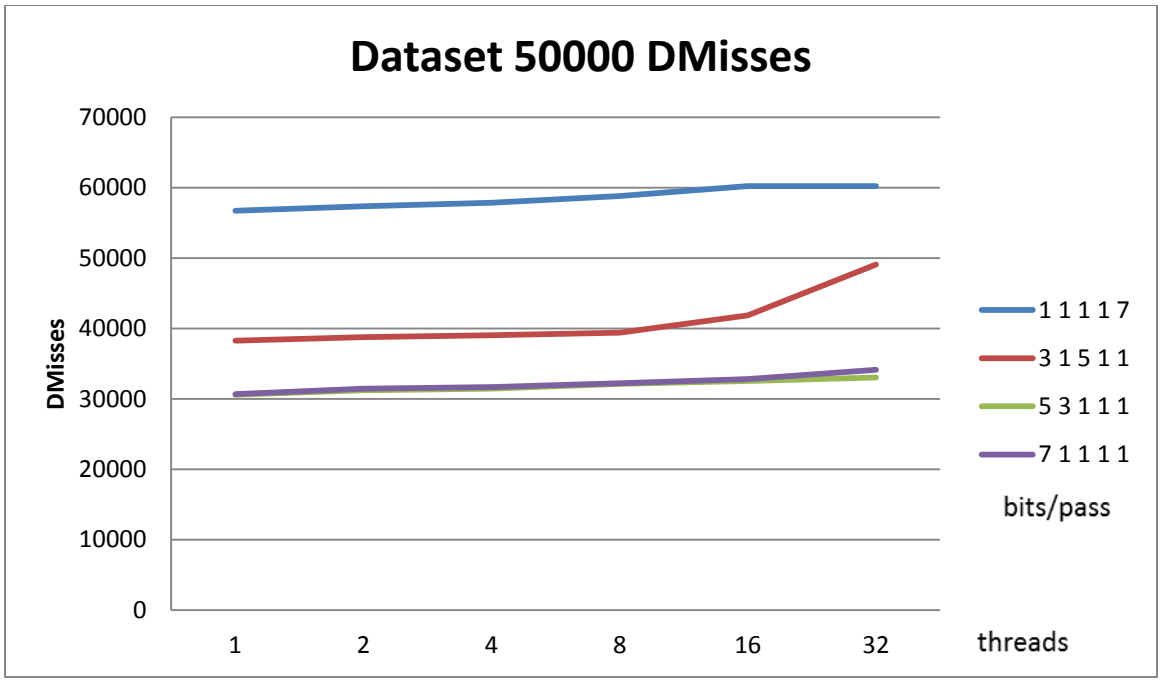
Dataset 50000, parallelization only, no affinity ----------

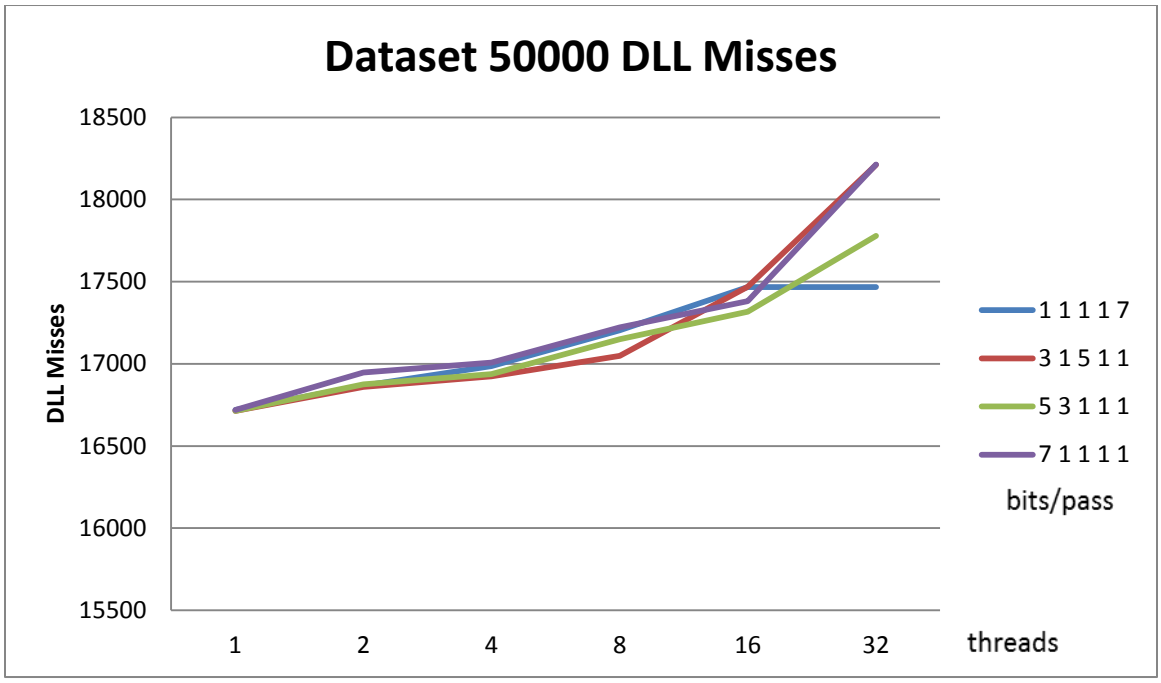
Dataset 50000 execution time
time (s)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1
2
4
8
16
32
threads
1 1 1 1 7
3 1 5 1 1
5 3 1 1 1
7 1 1 1 1
bits/pass


Dataset 50000 Affinity
time(s)
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
00000 11111 01111 00111 00011 00001
Affinity bits/pass
1 1 1 1 7 for 512 threads
3 1 5 1 1 for 8 threads
5 1 3 1 1 1 for 4 threads
7 1 1 1 1 for 2 threads
bits/pass

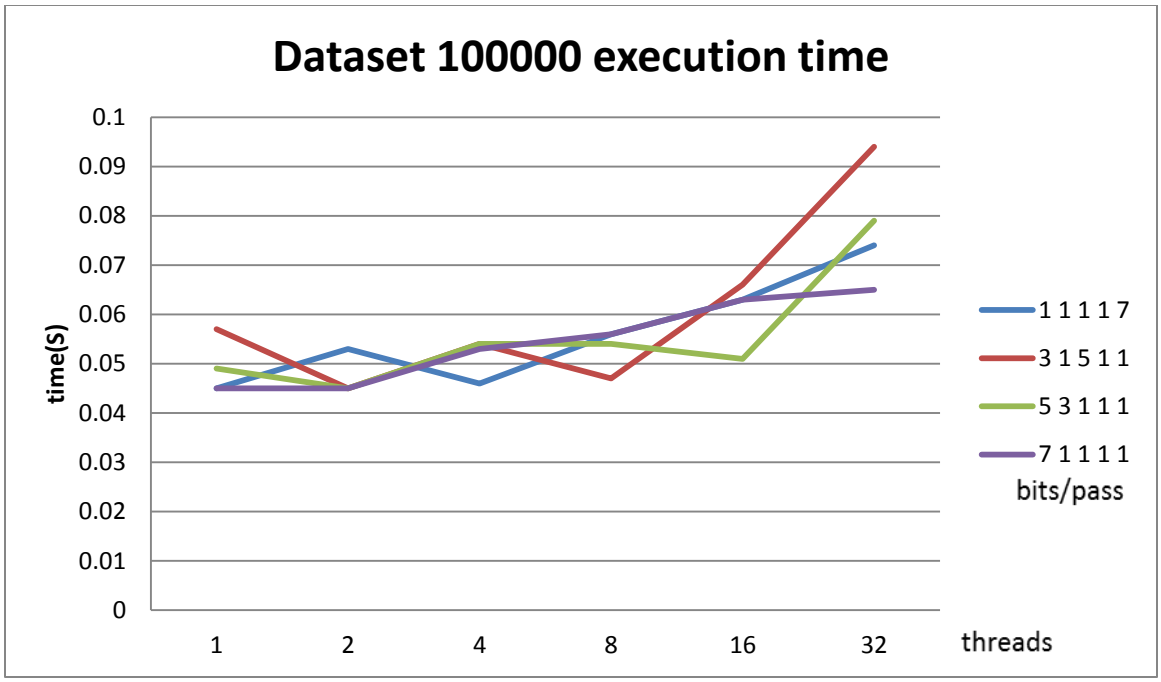

Dataset 50000 Affinity for 1024 threads
time(s)
10
9
8
7
6
5
4
3
2
1
0
00000
11111
01111
00111
00011
00001
Affinity bits/pass
1 1 1 1 7
3 1 5 1 1
5 1 3 1 1 1
7 1 1 1 1
bits/pass

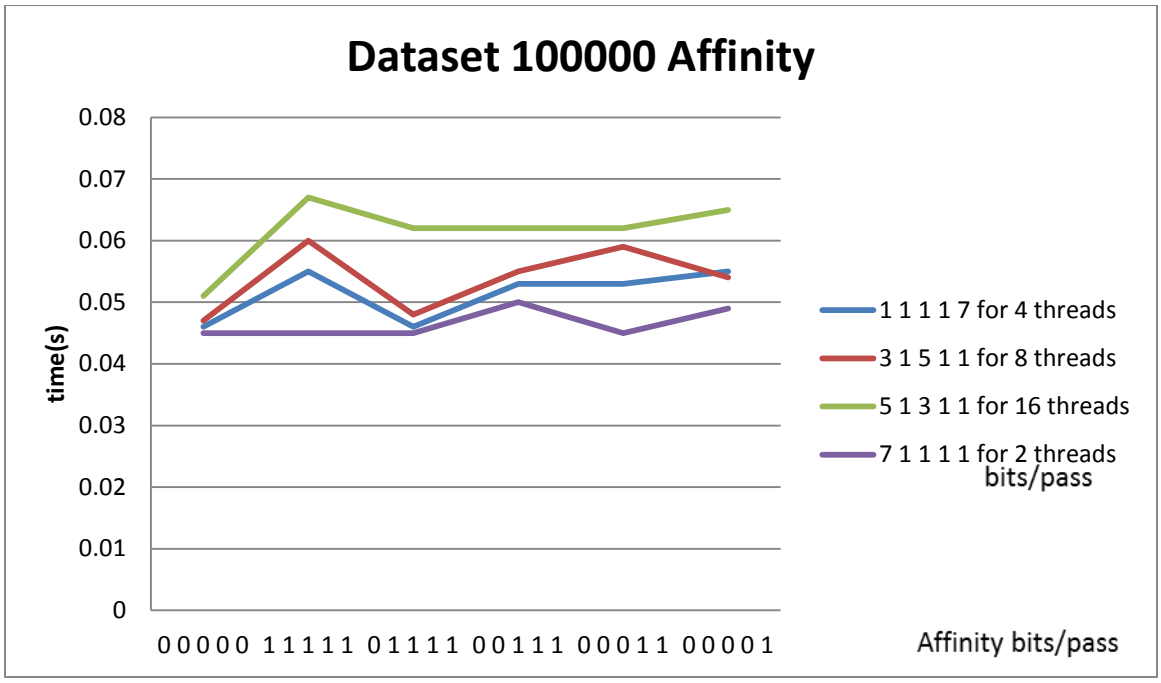

Dataset 50000 IC Misses
IC Misses
1800
1600
1400
1200
1000
800
600
400
200
0
1
2
4
8
16
32
threads
1 1 1 1 7
3 1 5 1 1
5 3 1 1 1
7 1 1 1 1
bits/pass

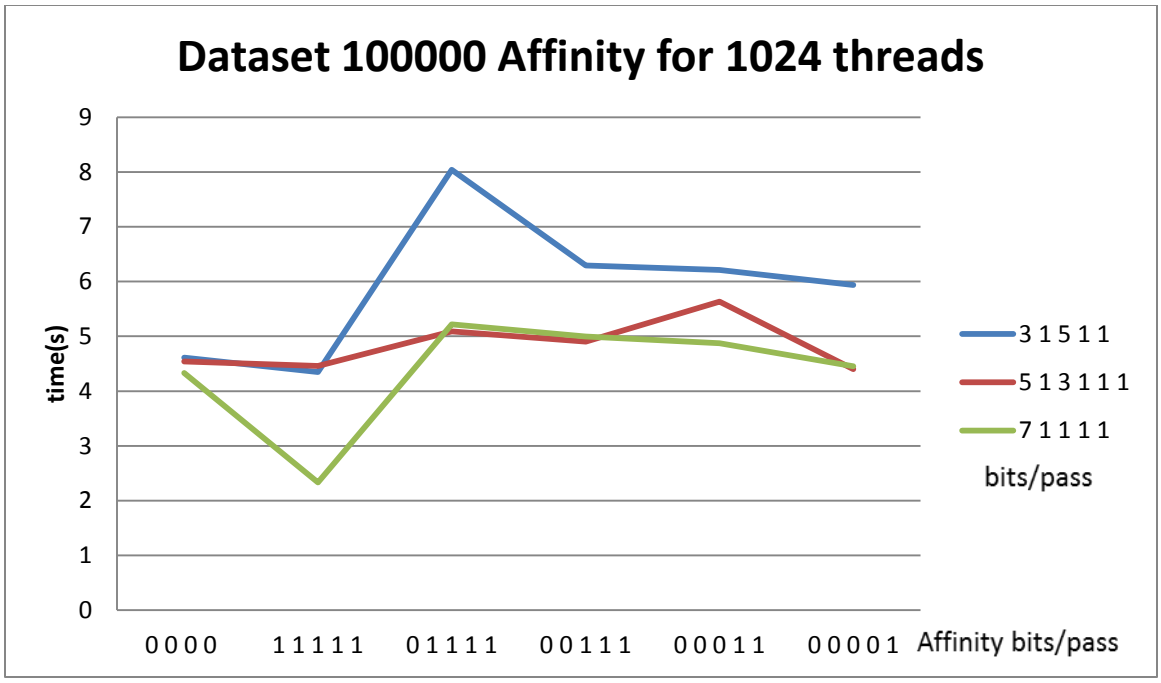


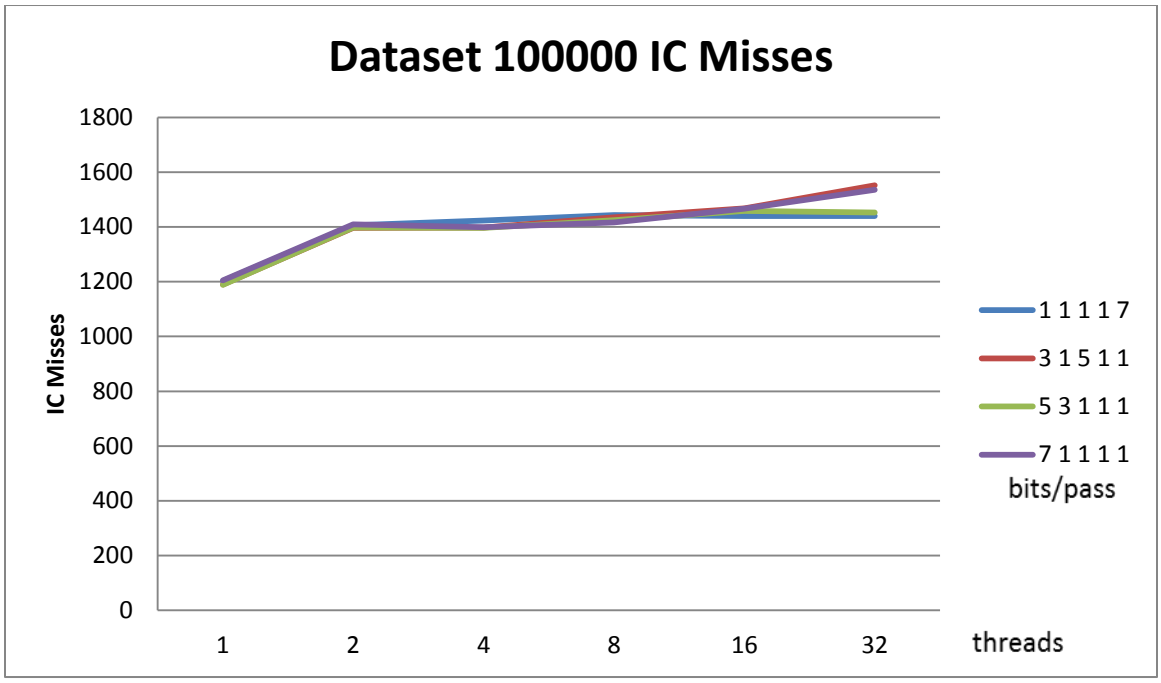


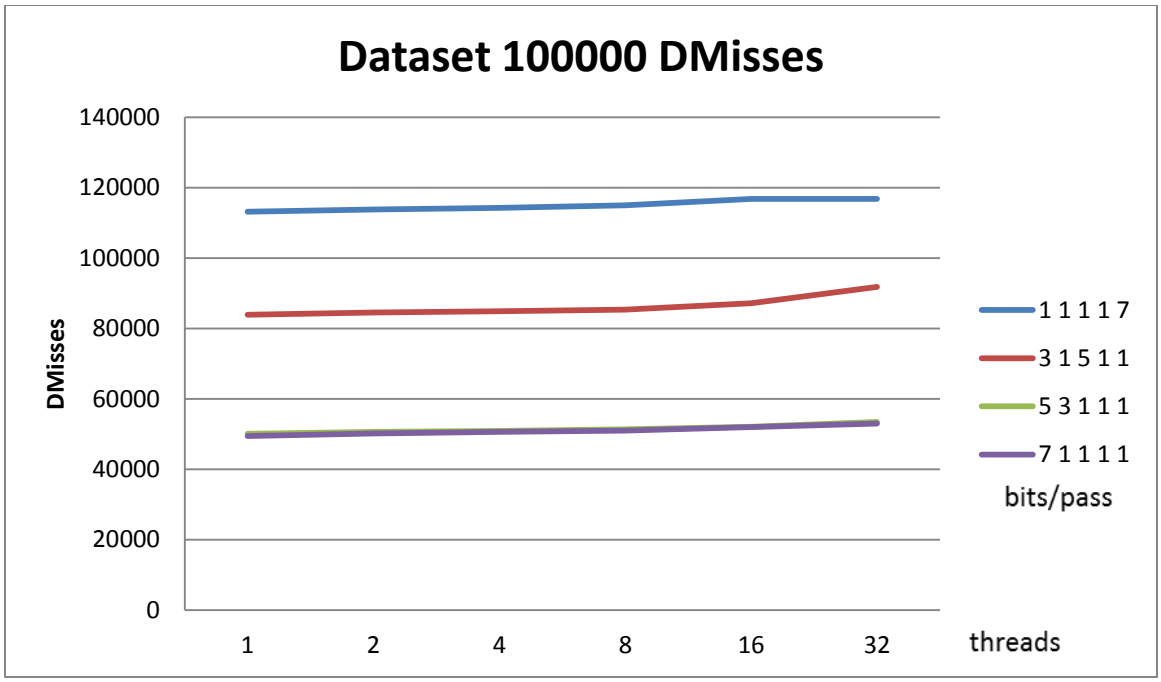
Dataset 100000, parallelization only, no affinity ----------

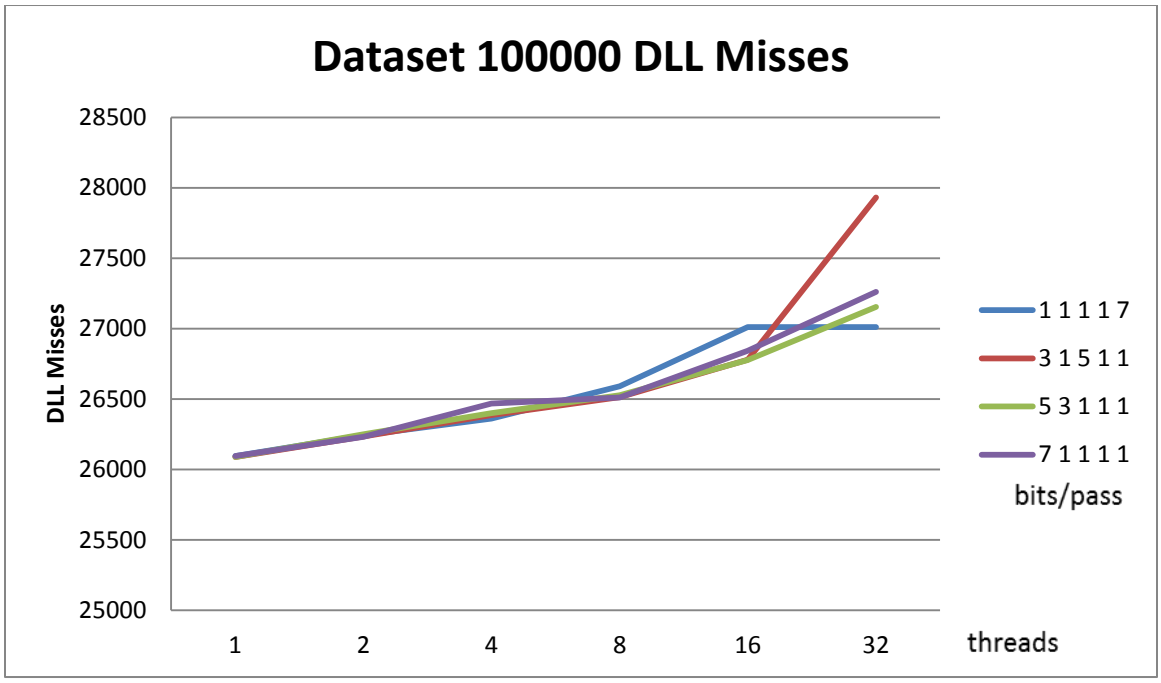

Dataset 100000 execution time
time(S)
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
1
2
4
8
16
32
threads
1 1 1 1 7
3 1 5 1 1
5 3 1 1 1
7 1 1 1 1
bits/pass


Dataset 100000 Affinity
time(s)
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
00000 11111 01111 00111 00011 00001
Affinity bits/pass
1 1 1 1 7 for 4 threads
3 1 5 1 1 for 8 threads
5 1 3 1 1 for 16 threads
7 1 1 1 1 for 2 threads
bits/pass

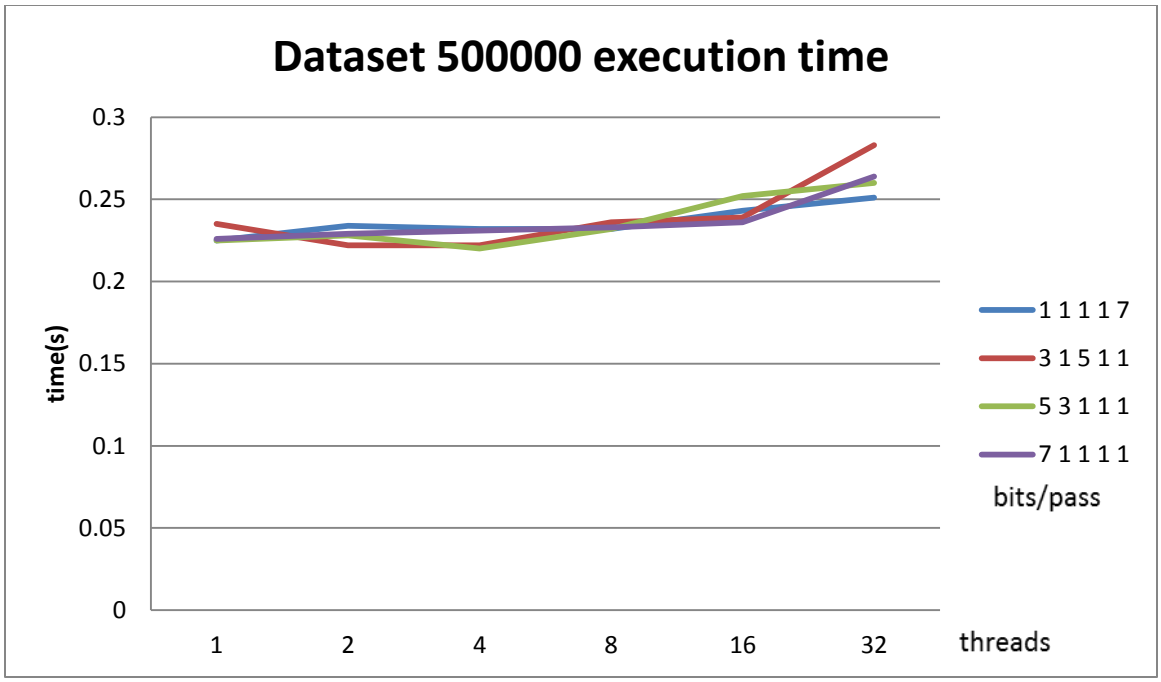

Dataset 100000 Affinity for 1024 threads
time(s)
9
8
7
6
5
4
3
2
1
0
0 0 0 0
1 1 1 1 1
0 1 1 1 1
0 0 1 1 1
0 0 0 1 1
0 0 0 0 1
Affinity bits/pass
3 1 5 1 1
5 1 3 1 1 1
7 1 1 1 1
bits/pass

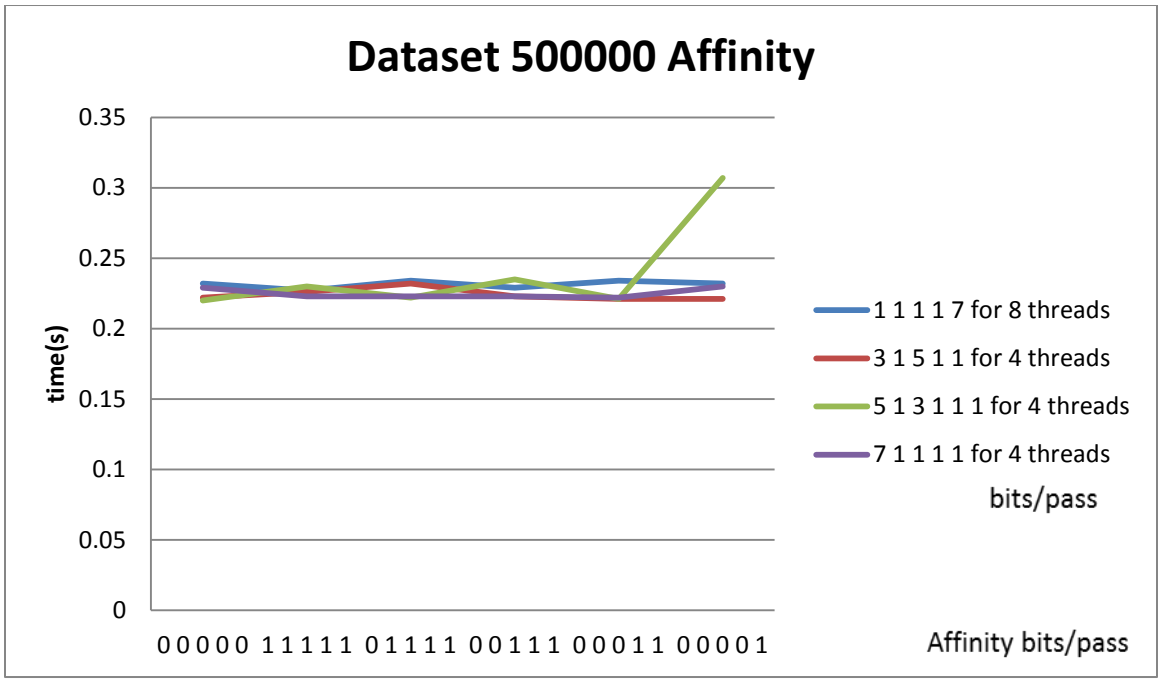

Dataset 100000 IC Misses
IC Misses
1800
1600
1400
1200
1000
800
600
400
200
0
1
2
4
8
16
32
threads
1 1 1 1 7
3 1 5 1 1
5 3 1 1 1
7 1 1 1 1
bits/pass

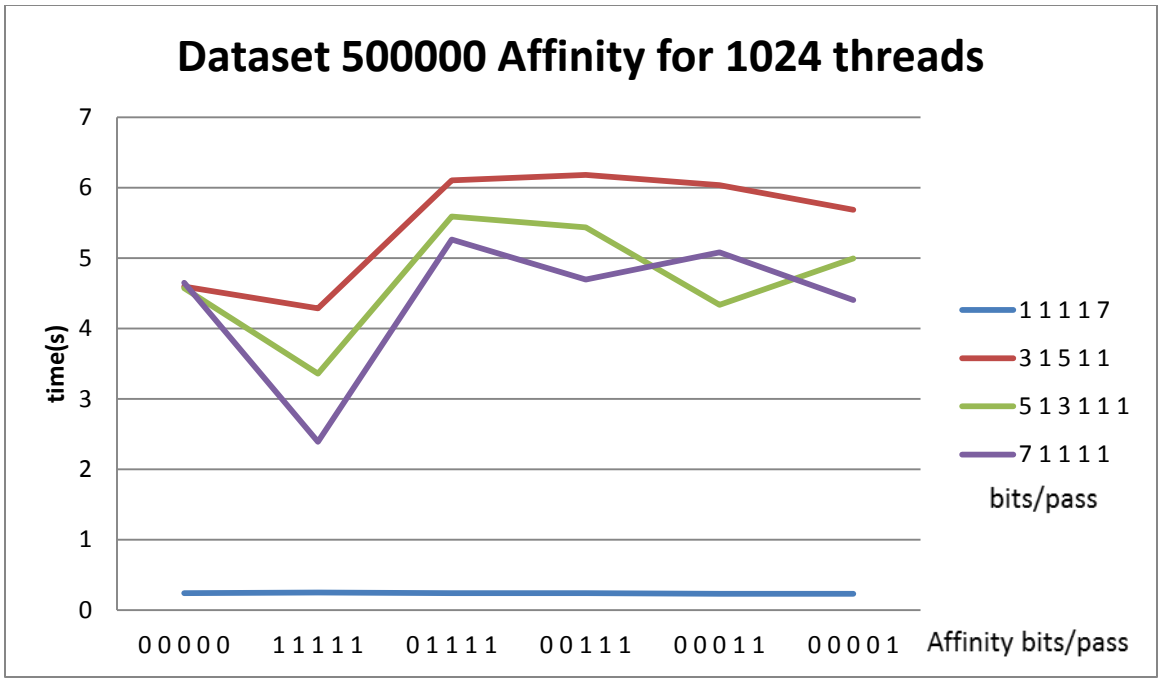


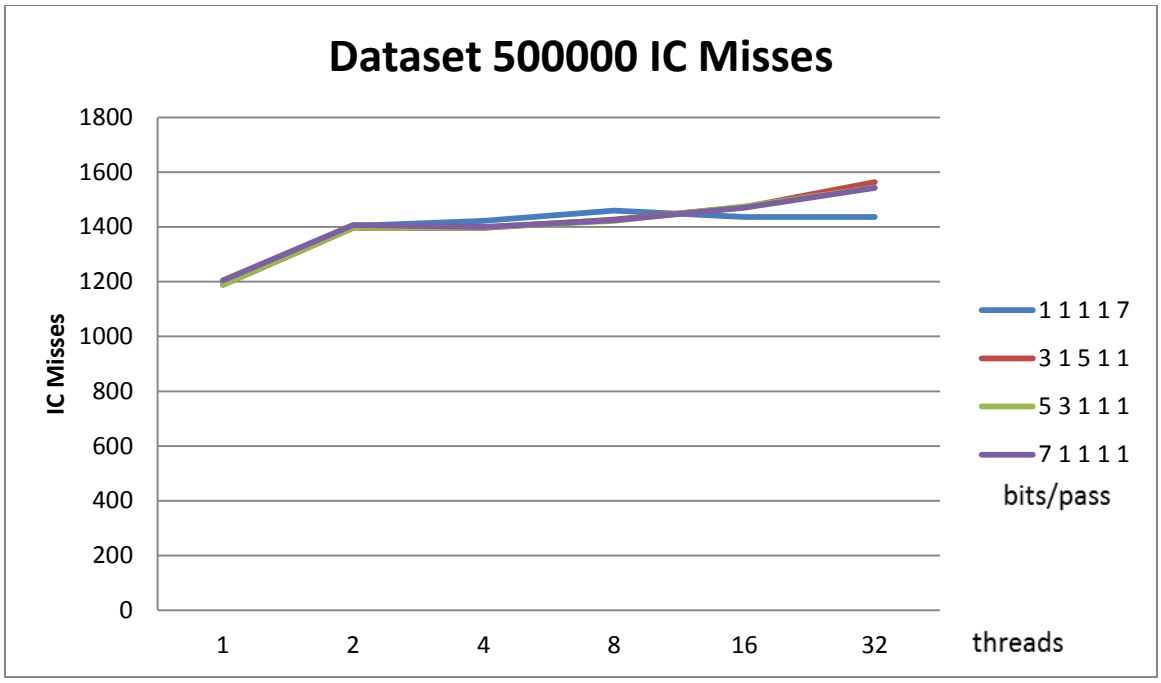


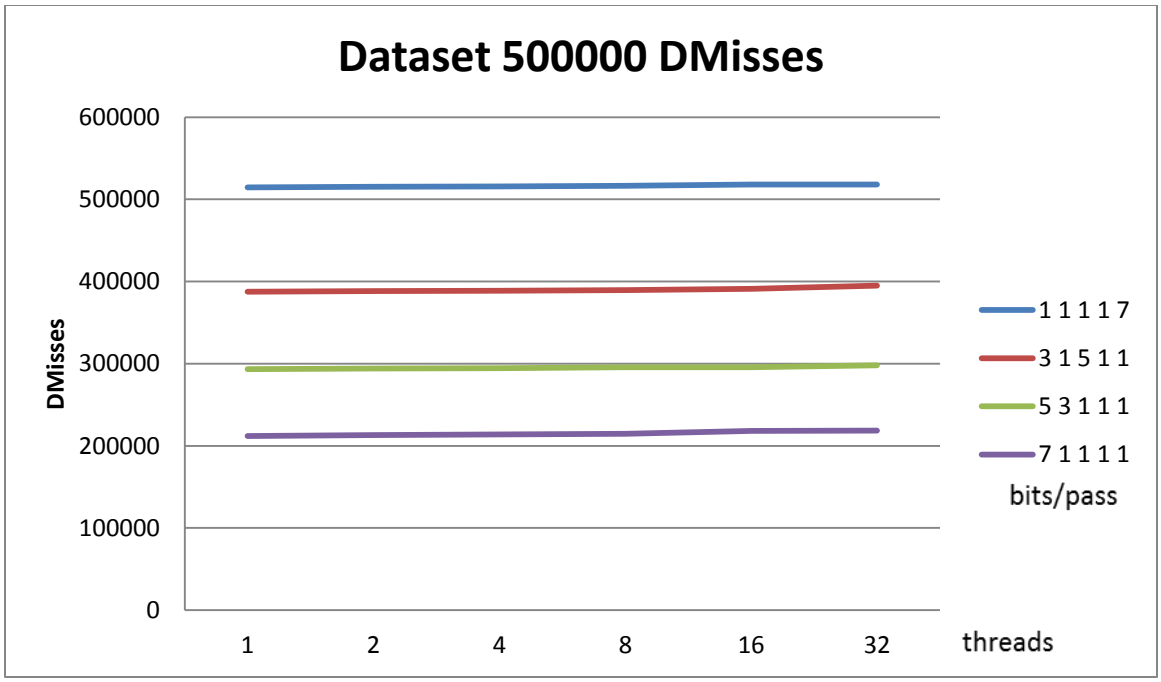
Dataset 500000, parallelization only, no affinity ----------

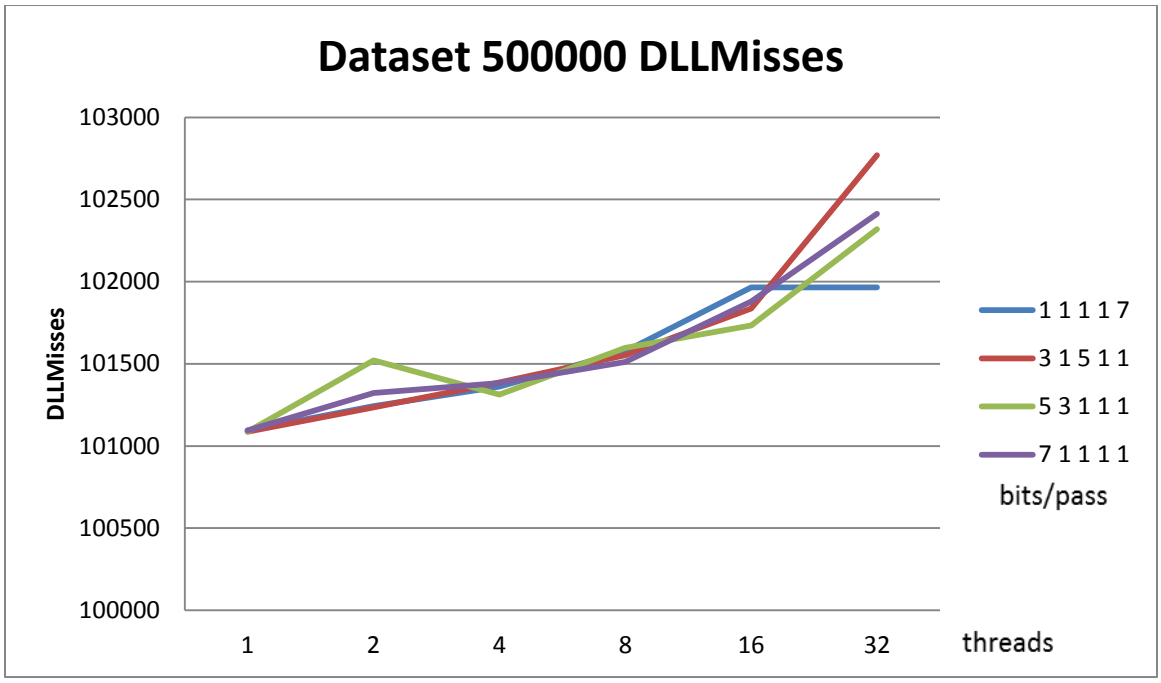

Dataset 500000 execution time
0.3
0.25
0.2
0.15
0.1
0.05
0
time(s)
1
2
4
8
16
32
threads
1 1 1 1 7
3 1 5 1 1
5 3 1 1 1
7 1 1 1 1
bits/pass


Dataset 500000 Affinity
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
time(s)
00000 11111 01111 00111 00011 00001
Affinity bits/pass
1 1 1 1 7 for 8 threads
3 1 5 1 1 for 4 threads
5 1 3 1 1 1 for 4 threads
7 1 1 1 1 for 4 threads
bits/pass


Dataset 500000 Affinity for 1024 threads
time(s)
7
6
5
4
3
2
1
0
00000
11111
01111
00111
00011
00001
Affinity bits/pass
11117
31511
51311 1
71111
bits/pass


Dataset 500000 IC Misses
IC Misses
1800
1600
1400
1200
1000
800
600
400
200
0
1
2
4
8
16
32
threads
11117
31511
53111
71111
bits/pass


Dataset 500000 DMisses
DMisses
600000
500000
400000
300000
200000
100000
0
1
2
4
8
16
32
threads
1 1 1 1 7
3 1 5 1 1
5 3 1 1 1
7 1 1 1 1
bits/pass


Dataset 500000 DLLMisses
DLLMisses
103000
102500
102000
101500
101000
100500
100000
1
2
4
8
16
32
threads
1 1 1 1 7
3 1 5 1 1
5 3 1 1 1
7 1 1 1 1
bits/pass