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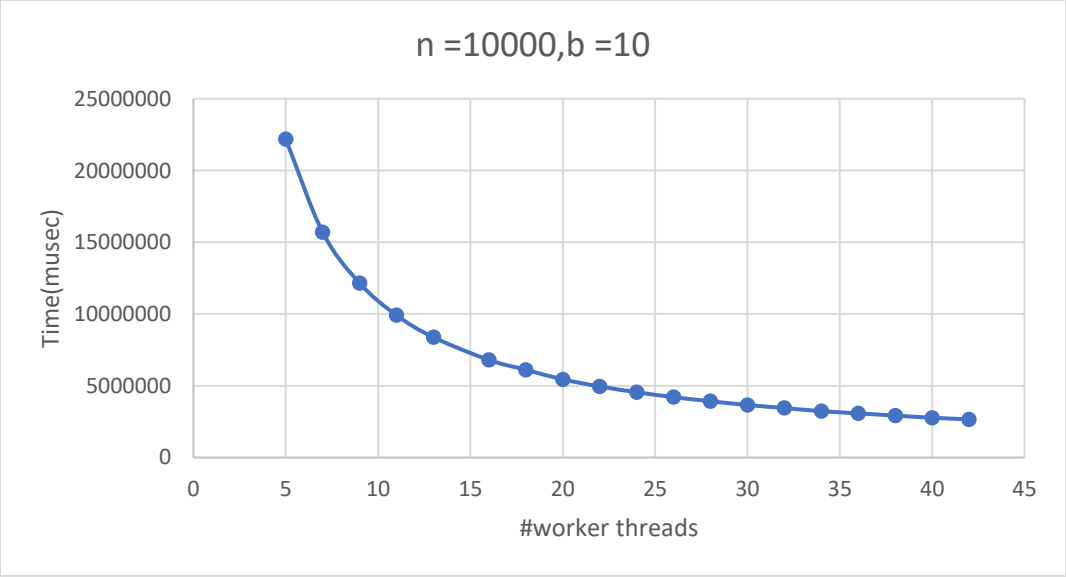
CSCE 313
PA4 Report

The PA3 was much slower than PA4. PA4 used a bounded buffer and also stat threads which helped improve the performance and take off some load from the worker threads. The performance has increased so the necessary trade-offs are worth it.

w	total time (musec)	sec	musec
3	36275847	36	275847
5	22189574	22	189574
7	15692840	15	692840
9	12148368	12	148368
11	9913587	9	913587
13	8375873	8	375873
16	6798731	6	798731
18	6116277	6	116277
20	5443025	5	443025
22	4952522	4	952522
24	4546541	4	546541
26	4207748	4	207748
28	3919193	3	919193
30	3659220	3	659220
32	3444629	3	444629
34	3229668	3	229668
36	3076480	3	76480
38	2922220	2	922220
40	2769570	2	769570
42	2657707	2	657707



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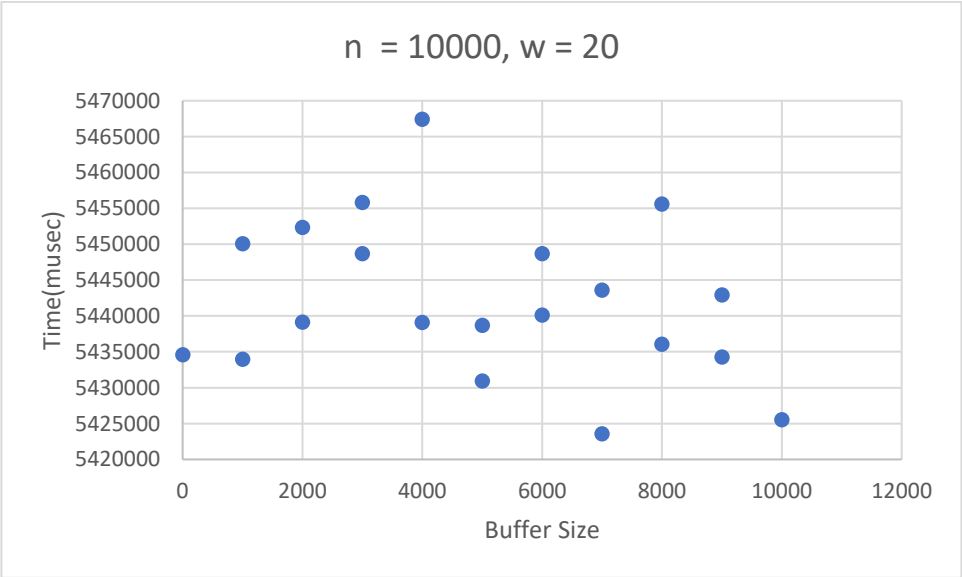
The performance improves as the number of worker threads increases. The program also in whole runs much faster than when we were using a Safe Buffer.

buf size	time(musec)
1	5434574
1000	5450048
1000	5433950
2000	5439107
2000	5452331
3000	5448677
3000	5455798
4000	5467395
4000	5439094
5000	5438672
5000	5430917
6000	5448683
6000	5440095
7000	5443566
7000	5423544
8000	5455577
8000	5436041
9000	5442905
9000	5434255
10000	5425534



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The performance time for a constant n values and constant number of worker threads is about the same. The buffer size only affects the performance by a few microseconds. Also the performance is affected by how many people are using the server.

3. The platform on with the data was gathered on is the CSCE LINUX server.