Pemrograman Jaringan B

Laporan Performance Test

Tugas 10

Ditulis Oleh:

Adnan Erlangga Raharja

05111740000100

Dosen:

Royyana Muslim Ijtihadie, S.Kom., M.Kom., Ph.D.

DEPARTEMEN INFORMATIKA

FAKULTAS TEKNOLOGI INFORMASI DAN KOMUNIKASI

INSTITUT TEKNOLOGI SEPULUH NOPEMBER

2020

Dokumentasi Tugas 10

Tugas 10:

1. Pull update terbaru
2. Jalankan async_server.py pada port 9002, 9003, 9004, 9005 (lihat pada BackendList)
3. Jalankan file lb.py, jalankan di port 44444
4. Jalankan browser, akseslah http://localhost:44444/page.html
5. Lihatlah di log program, bahwa setiap request akan dilayani oleh backend yang bergantian
6. Lakukan performance test seperti pada tugas 9, bandingkan penggunaan load balancer dengan async_server dengan server_thread_http pada folder progjar5
7. Buatlah tabel hasilnya

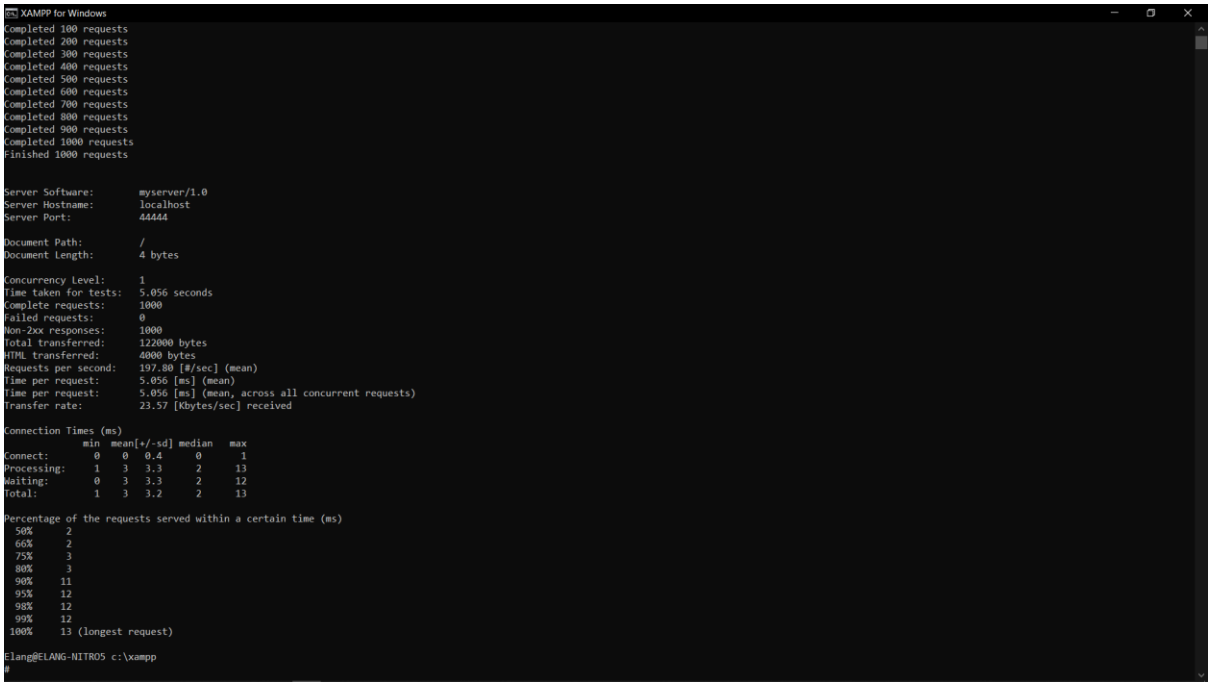
Jawaban:

Tabel Hasil Benchmark **Asynchronous Server dengan Load Balancer**.

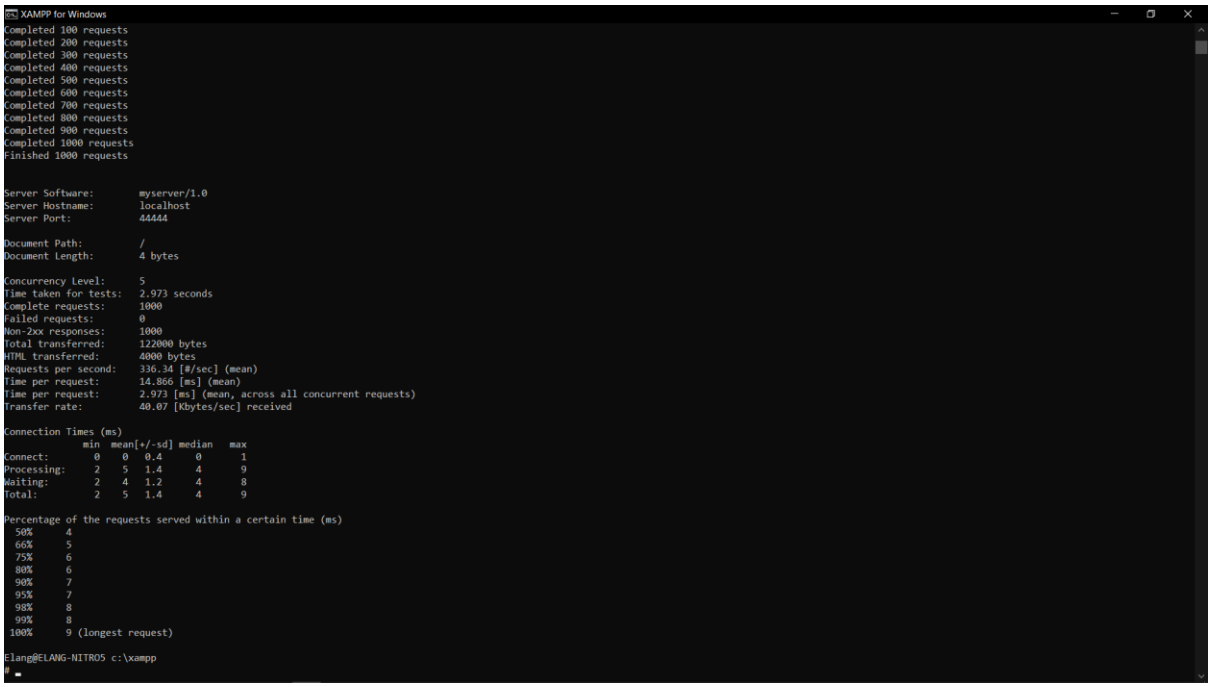
No test	Concurrency level	Time taken for test [seconds]	Complete request	Failed request	Total transferred [bytes]	Request per second [#/sec]	Time per request [ms]	Transfer rate [Kbytes/sec]
1	1	5.056	1000	0	122000	197.80	5.056	23.57
2	5	2.973	1000	0	122000	336.34	14.866	40.07
3	10	50.154	1000	0	122000	19.94	501.537	2.38
4	50	66.487	1000	0	122000	15.04	3324.360	1.79
5	100	66.988	1000	0	122000	14.93	6698.846	1.78
6	250	67.005	1000	0	122000	14.92	16751.242	1.78
7	500	68.477	1000	0	122000	14.60	34238.582	1.74
8	1000	72.944	1000	0	122000	13.71	72943.633	1.63

Screenshots:

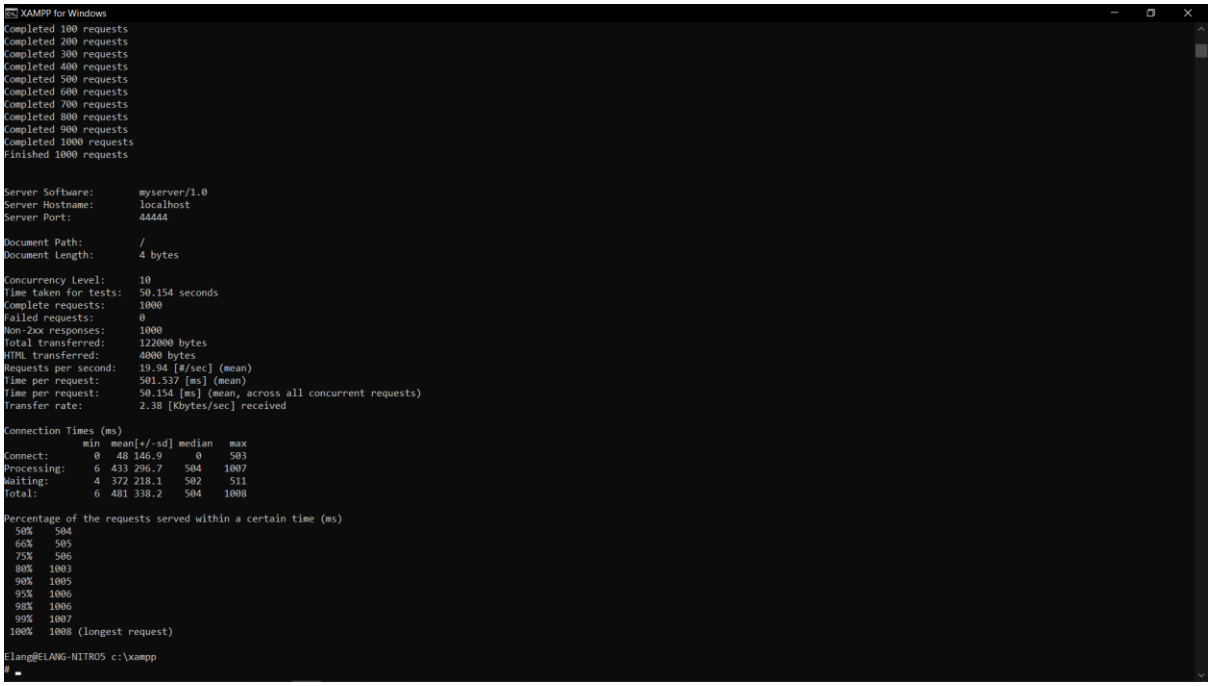
Concurrency Level 1



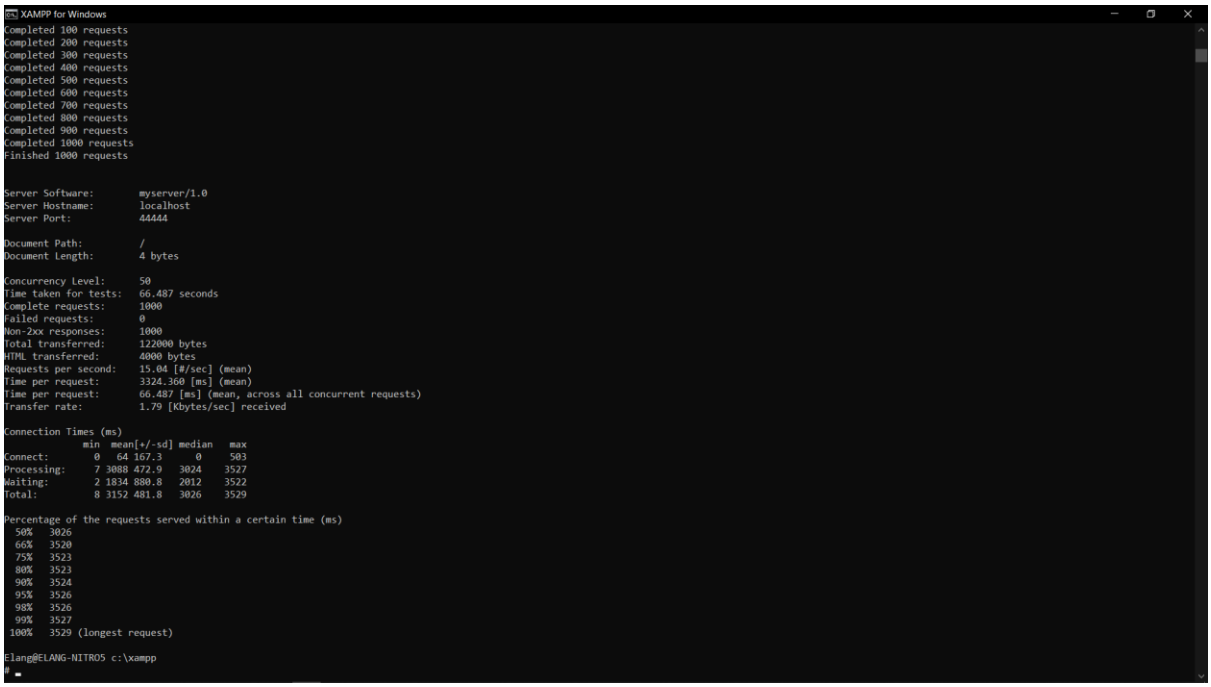
Concurrency Level 5



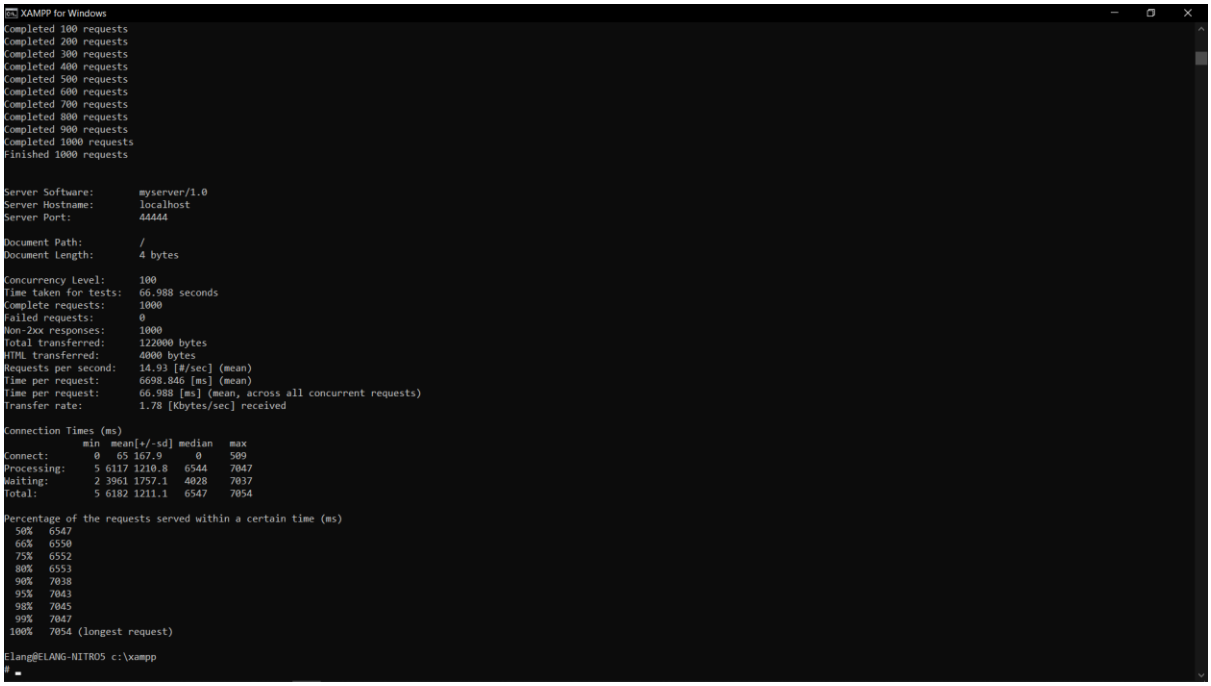
Concurrency Level 10



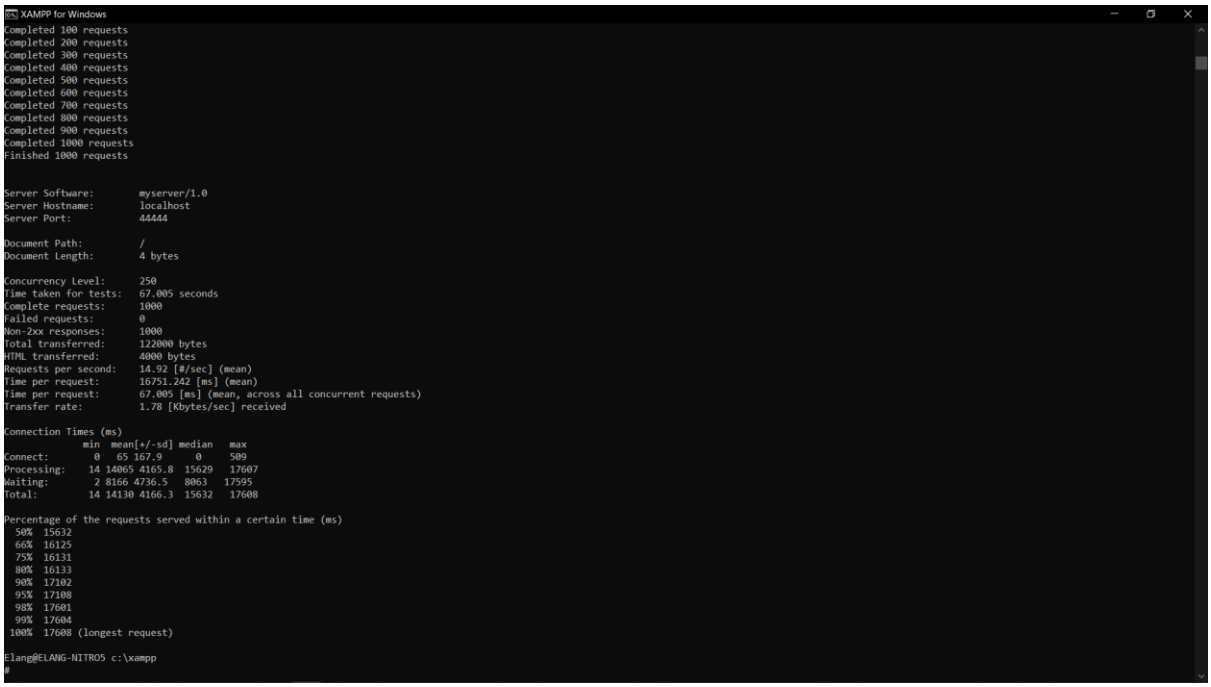
Concurrency Level 50



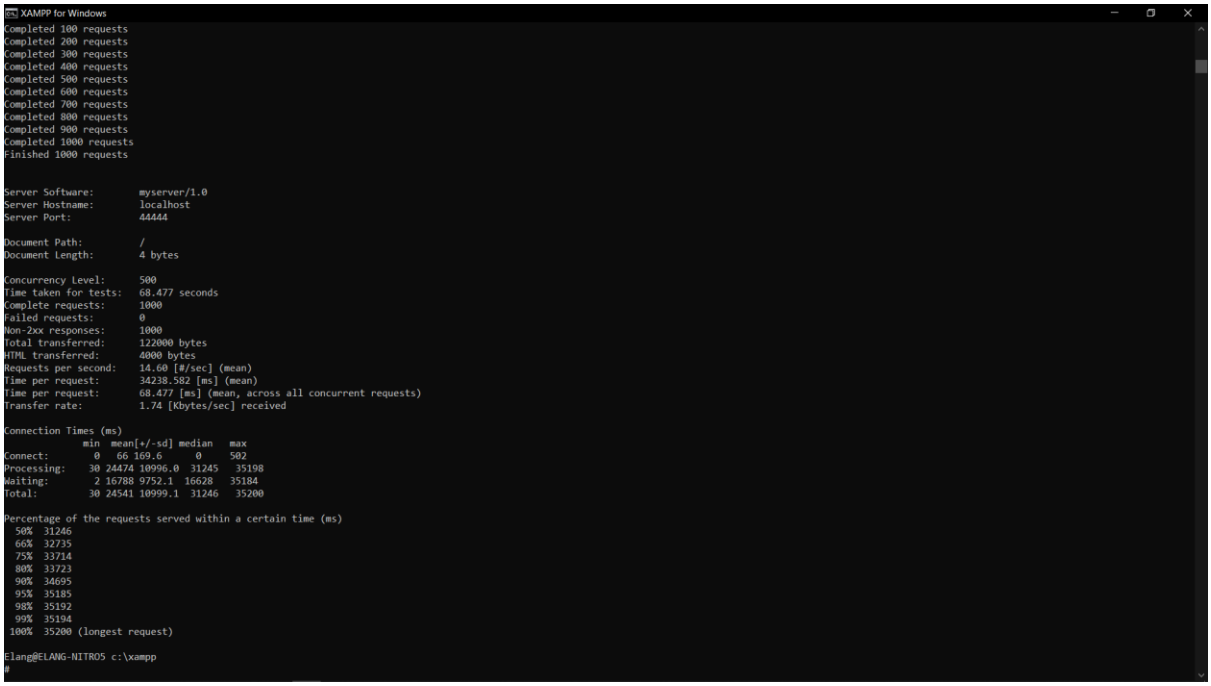
Concurrency Level 100



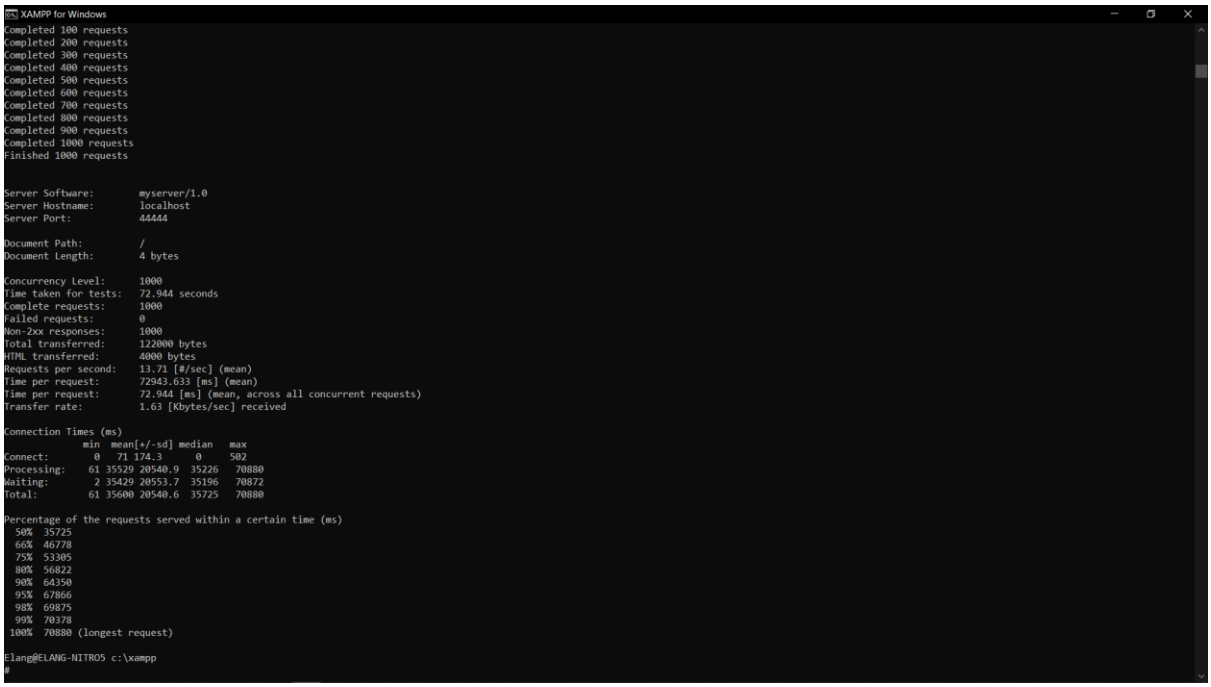
Concurrency Level 250



Concurrency Level 500



Concurrency Level 1000

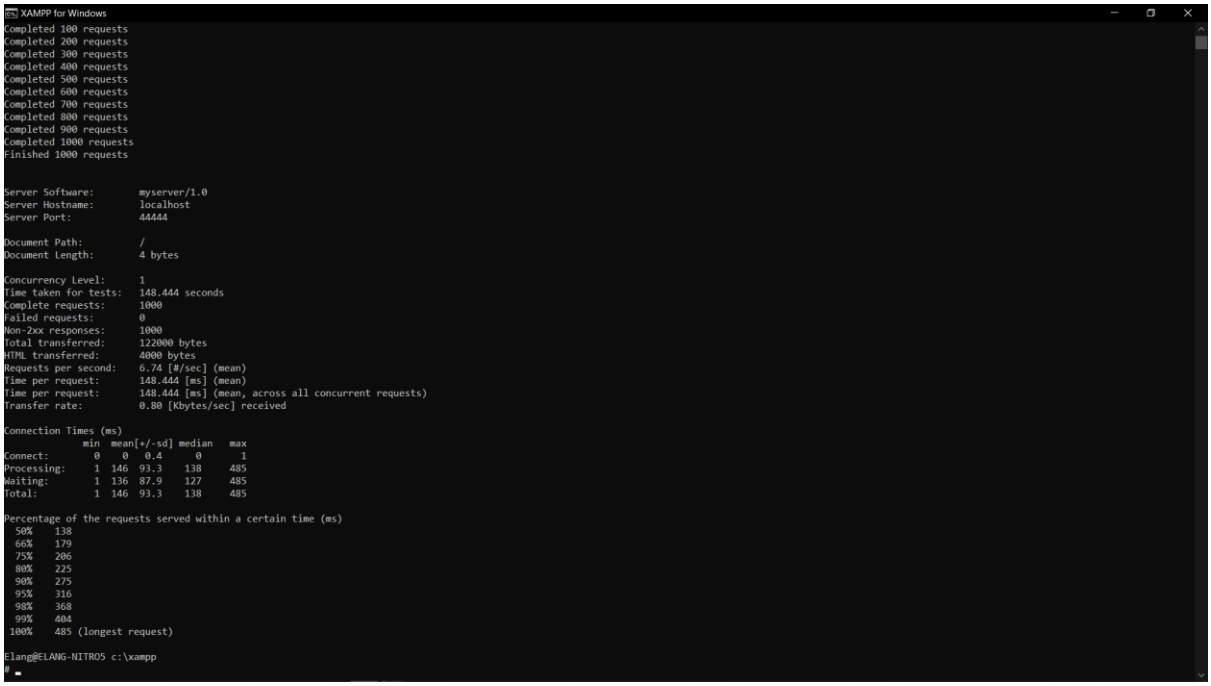


Tabel Hasil Benchmark **Thread Server**.

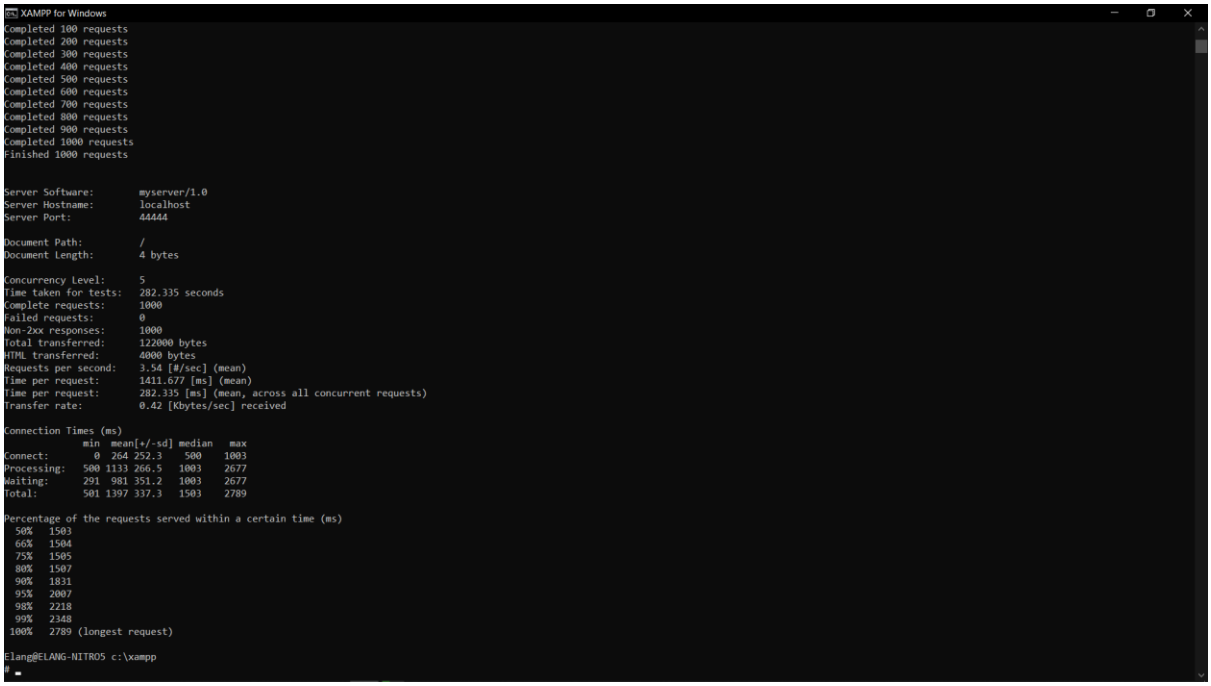
No test	Concurrency level	Time taken for test [seconds]	Complete request	Failed request	Total transferred [bytes]	Request per second [#/sec]	Time per request [ms]	Transfer rate [Kbytes/sec]
1	1	148.444	1000	0	122000	6.74	148.444	0.80
2	5	282.335	1000	0	122000	3.54	1411.677	0.42
3	10	391.393	1000	0	122000	2.55	3913.930	0.30
4	50	252.264	1000	0	122000	3.96	12613.218	0.47
5	100	252.266	1000	0	122000	3.96	25226.610	0.47
6	250	266.864	1000	0	122000	3.75	66716.100	0.45
7	500	344.041	1000	0	122000	2.91	172020.514	0.35
8	1000	569.898	1000	0	122000	1.75	569898.083	0.21

Screenshots:

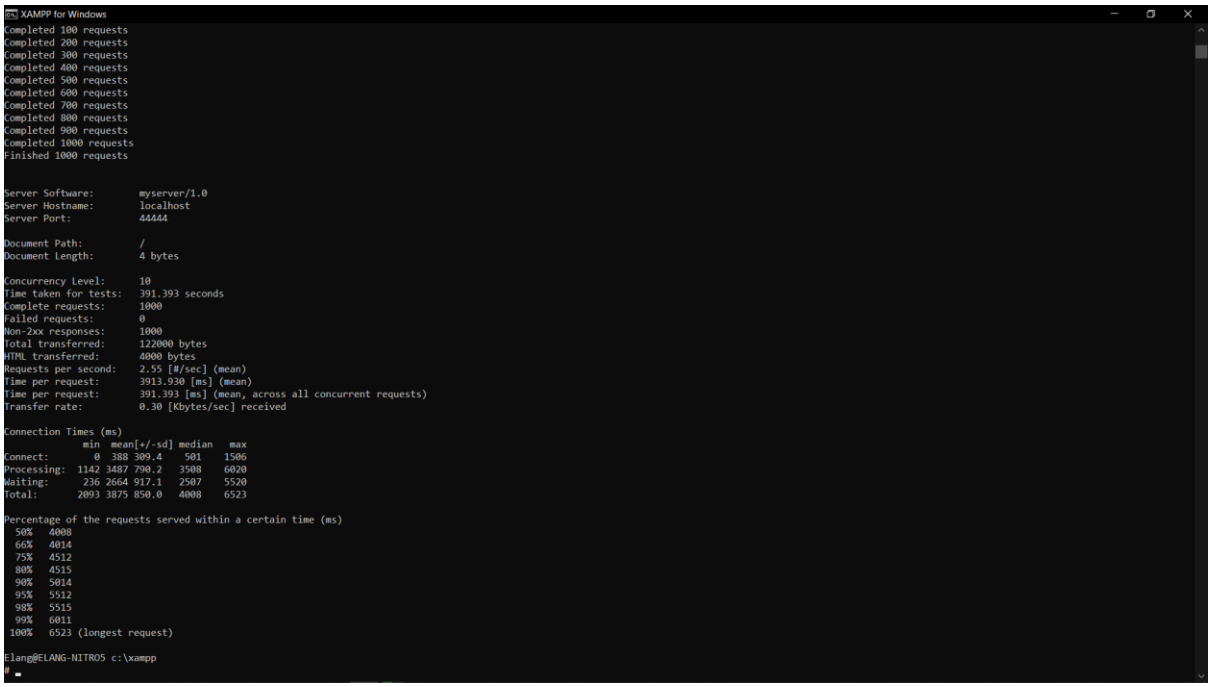
Concurrency Level 1



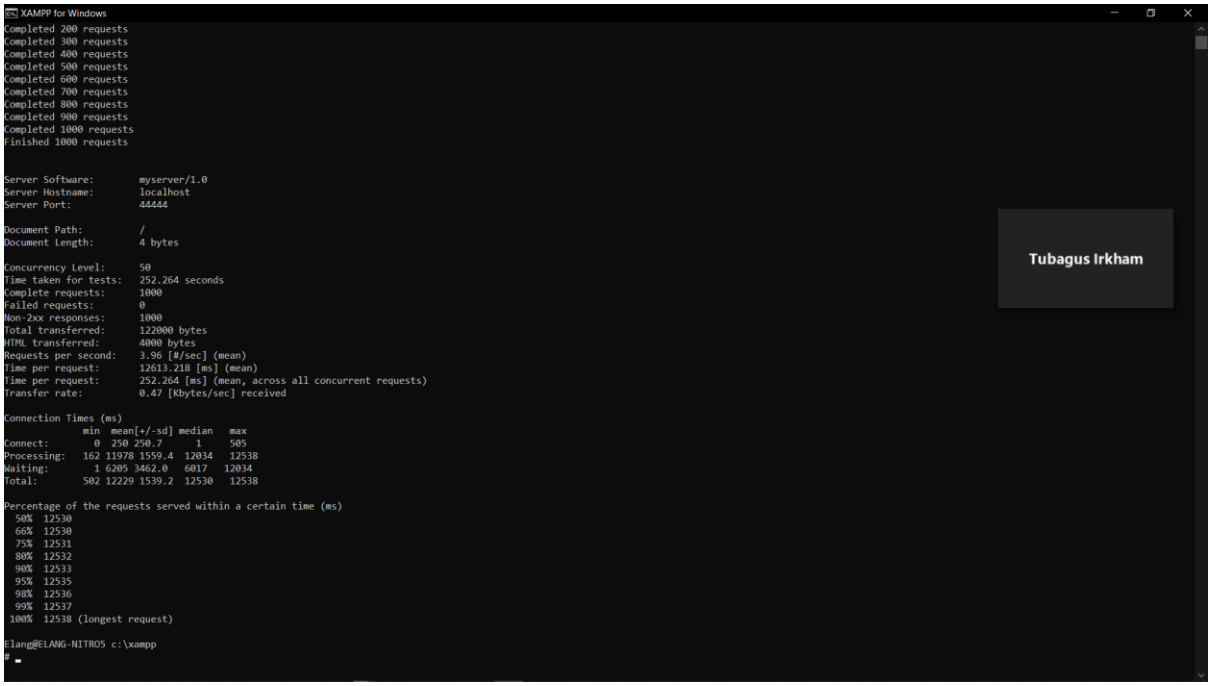
Concurrency Level 5



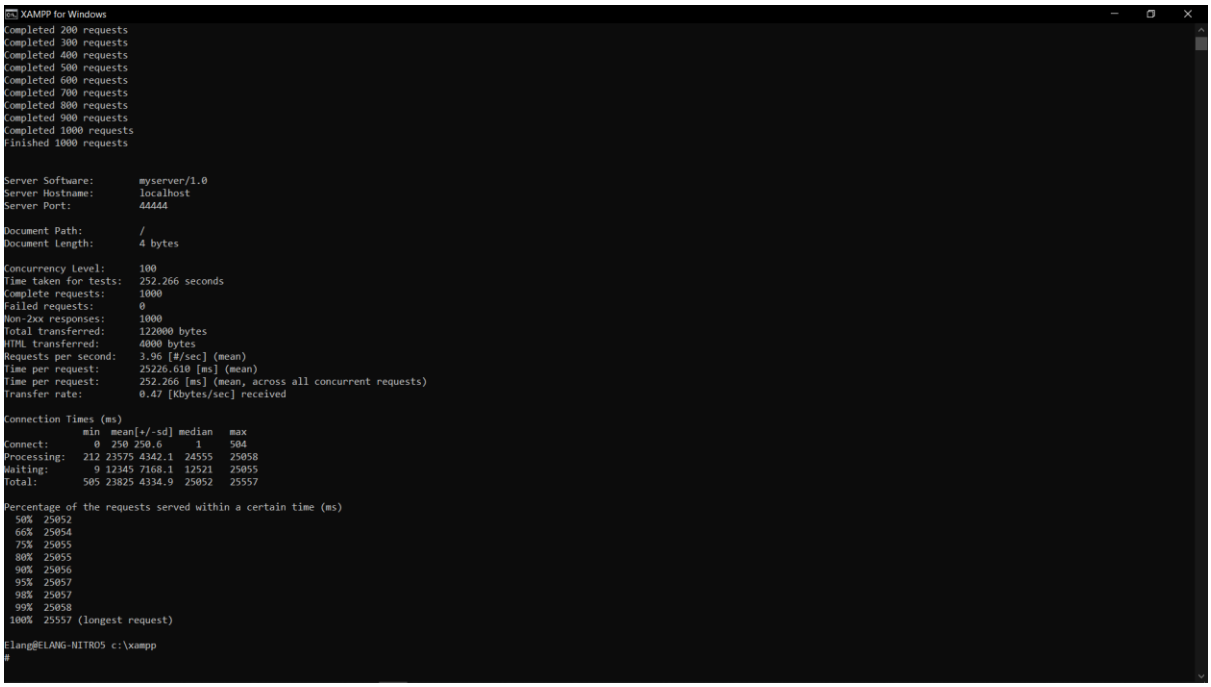
Concurrency Level 10



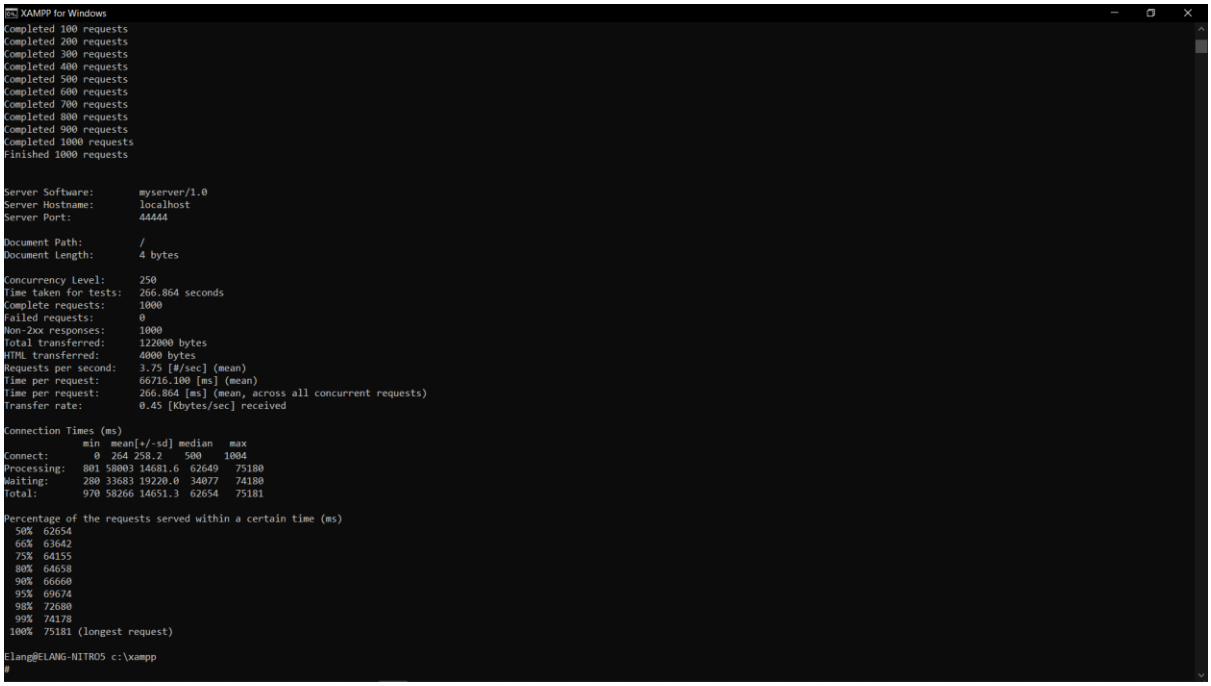
Concurrency Level 50



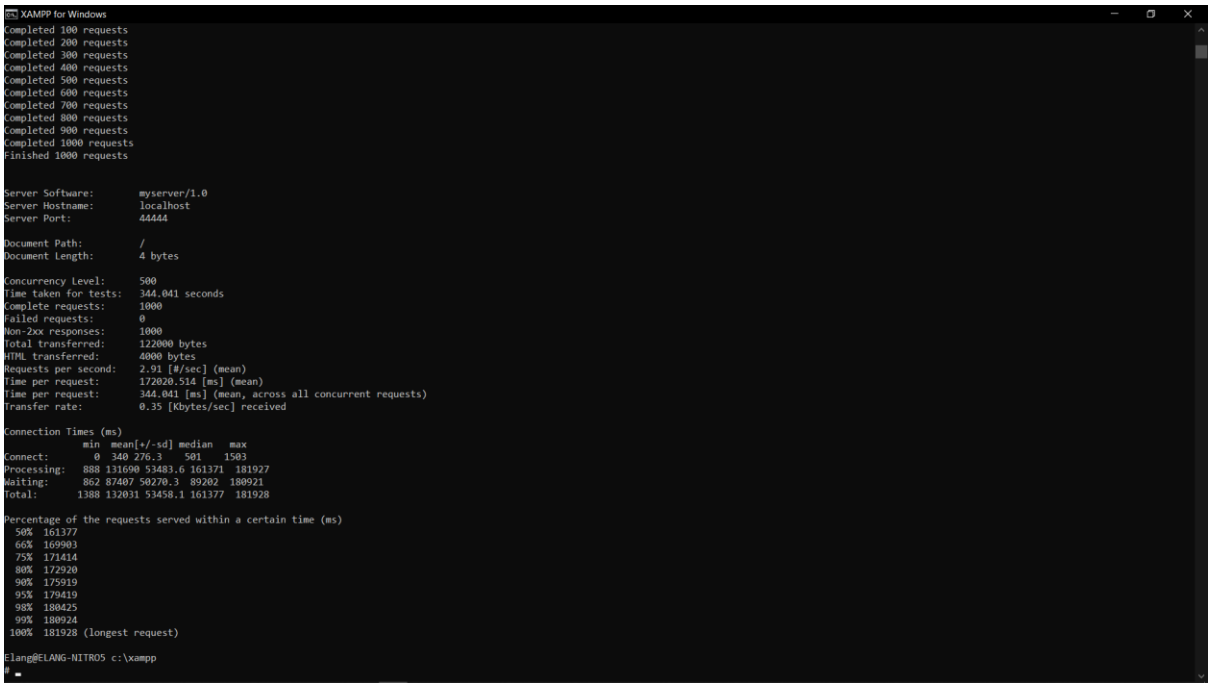
Concurrency Level 100



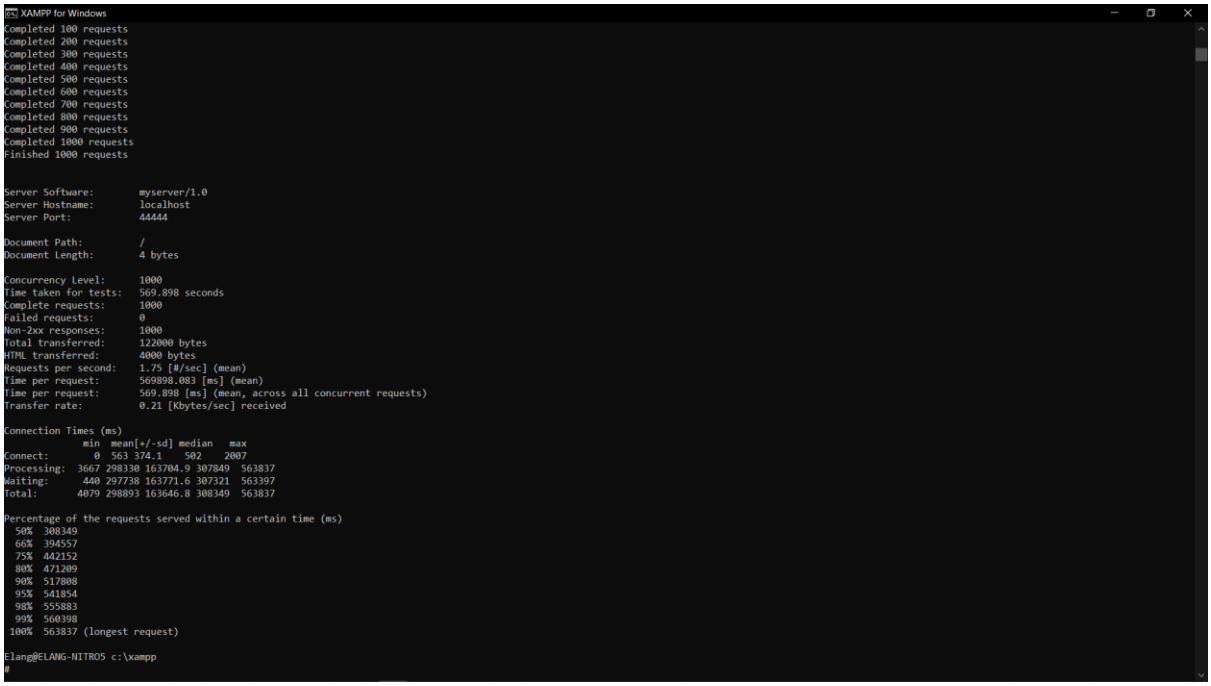
Concurrency Level 250



Concurrency Level 500



Concurrency Level 1000



Kesimpulan

Dari hasil benchmark yang telah dilakukan diatas, bisa disimpulkan bahwa penggunaan asynchronous server yang ditambah dengan load balancer jauh lebih baik daripada thread server.