PERFORMANCE TEST

PEMROGRAMAN JARINGAN - C

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A. Parameter Test

Jumlah Request: 1000
Konkurensi: 1,5,10

B. Hasil Performace Test

1. Server Async

No test	Concurrency level	Time taken for test	Complete request	Failed request	Total transferred	Request per second	Time per request	Transfer rate
1	1	0.662 seconds	1000	0	122000 bytes	1509.80 [#/sec]	0.662 [ms]	179.88 [Kbytes /sec]
2	5	0.665 seconds	1000	0	122000 bytes	1502.92 [#/sec]	3.327 [ms]	179.06 [Kbytes /sec]
3	10	0.608 seconds	1000	0	122000 bytes	1645.19 [#/sec]	6.078 [ms]	196.01 [Kbytes /sec]

2. Server Thread

No test	Concurrency level	Time taken for test	Complete request	Failed request	Total transferred	Request per second	Time per request	Transfer rate
1	1	1.919 seconds	1000	0	115000 bytes	521.12 [#/sec]	1.919 [ms]	58.52 [Kbytes /sec]
2	5	4.399 seconds	1000	0	115000 bytes	227.33 [#/sec]	21.994 [ms]	25.53 [Kbytes /sec]
3	10	1.884 seconds	1000	0	115000 bytes	530.77 [#/sec]	18.840 [ms]	59.61 [Kbytes /sec]

C. Kesimpulan

Dari hasil diatas, dapat saya simpulkan bahwa:

1. Server async memproses lebih cepat dibandingkan dengan server thread. Dapat dilihat pada kolom time taken for request dan request per second.
2. Server async juga mempunyai transfer rate lebih cepat.
3. Server thread mengirimkan byte lebih sedikit ketimbang server async.

D. Capture Performance Test

1. Server Async Concurrency 1

2. Server Async Concurrency 5

3. Server Async Concurrency 10


```
hisam@hisam-Linux:~$ ab -n 1000 -c 10 http://127.0.0.1:45000/
This is ApacheBench, Version 2.3 <$Revision: 1807734 $>
Copyright 1996 Adam Twiss, Zeus Technology Ltd, http://www.zeustech.net/
Licensed to The Apache Software Foundation, http://www.apache.org/

Benchmarking 127.0.0.1 (be patient)
Completed 100 requests
Completed 200 requests
Completed 300 requests
Completed 400 requests
Completed 500 requests
Completed 600 requests
Completed 700 requests
Completed 800 requests
Completed 900 requests
Completed 1000 requests
Finished 1000 requests


Server Software:        myserver/1.0
Server Hostname:        127.0.0.1
Server Port:            45000

Document Path:          /
Document Length:        4 bytes

Concurrency Level:      10
Time taken for tests:   0.608 seconds
Complete requests:      1000
Failed requests:        0
Non-2xx responses:      1000
Total transferred:      122000 bytes
HTML transferred:       4000 bytes
Requests per second:    1645.19 [#/sec] (mean)
Time per request:       6.078 [ms] (mean)
Time per request:       0.608 [ms] (mean, across all concurrent requests)
Transfer rate:          196.01 [Kbytes/sec] received

Connection Times (ms)
              min  mean[+/-sd] median   max
Connect:        0    0   0.0      0       0
Processing:     0    4   1.5      3      14
Waiting:        0    4   1.5      3      14
Total:          1    4   1.5      3      14

Percentage of the requests served within a certain time (ms)
  50%      3
  66%      4
  75%      4
  80%      4
  90%      5
  95%      6
  98%      9
  99%     11
```

4. Server Thread Concurrency 1


```
hisamwp@DESKTOP-CTJQJRO:~$ ab -n 1000 -c 1 http://127.0.0.1:46000/
This is ApacheBench, Version 2.3 <$Revision: 1807734 $>
Copyright 1996 Adam Twiss, Zeus Technology Ltd, http://www.zeustech.net/
Licensed to The Apache Software Foundation, http://www.apache.org/

Benchmarking 127.0.0.1 (be patient)
Completed 100 requests
Completed 200 requests
Completed 300 requests
Completed 400 requests
Completed 500 requests
Completed 600 requests
Completed 700 requests
Completed 800 requests
Completed 900 requests
Completed 1000 requests
Finished 1000 requests


Server Software:        myserver/1.0
Server Hostname:        127.0.0.1
Server Port:            46000

Document Path:          /
Document Length:        4 bytes

Concurrency Level:      1
Time taken for tests:   1.919 seconds
Complete requests:      1000
Failed requests:        0
Non-2xx responses:      1000
Total transferred:      115000 bytes
HTML transferred:       4000 bytes
Requests per second:    521.12 [#/sec] (mean)
Time per request:       1.919 [ms] (mean)
Time per request:       1.919 [ms] (mean, across all concurrent requests)
Transfer rate:          58.52 [Kbytes/sec] received

Connection Times (ms)
              min  mean[+/-sd] median   max
Connect:        0    0   0.2      0       3
Processing:     1    1   1.4      1      25
Waiting:        1    1   1.3      1      25
Total:          1    2   1.4      1      25
```

5. Server Thread Concurrency 5

```
hisamwp@DESKTOP-CTJQJRO:~$ ab -n 1000 -c 5 http://127.0.0.1:46000/
This is ApacheBench, Version 2.3 <$Revision: 1807734 $>
Copyright 1996 Adam Twiss, Zeus Technology Ltd, http://www.zeustech.net/
Licensed to The Apache Software Foundation, http://www.apache.org/

Benchmarking 127.0.0.1 (be patient)
Completed 100 requests
Completed 200 requests
Completed 300 requests
Completed 400 requests
Completed 500 requests
Completed 600 requests
Completed 700 requests
Completed 800 requests
Completed 900 requests
Completed 1000 requests
Finished 1000 requests


Server Software:        myserver/1.0
Server Hostname:        127.0.0.1
Server Port:            46000

Document Path:          /
Document Length:        4 bytes

Concurrency Level:      5
Time taken for tests:   4.399 seconds
Complete requests:      1000
Failed requests:        0
Non-2xx responses:      1000
Total transferred:      115000 bytes
HTML transferred:       4000 bytes
Requests per second:    227.33 [#/sec] (mean)
Time per request:       21.994 [ms] (mean)
Time per request:       4.399 [ms] (mean, across all concurrent requests)
Transfer rate:          25.53 [Kbytes/sec] received

Connection Times (ms)
              min  mean[+/-sd] median   max
Connect:        0   12   84.3      0    1077
Processing:     1    7   15.5      5     214
Waiting:        1    7   15.4      4     214
Total:          2   20   86.8      5    1080
```

6. Server Thread Concurrency 10

```
hisamwp@DESKTOP-CTJQJRO:~$ ab -n 1000 -c 10 http://127.0.0.1:46000/
This is ApacheBench, Version 2.3 <$Revision: 1807734 $>
Copyright 1996 Adam Twiss, Zeus Technology Ltd, http://www.zeustech.net/
Licensed to The Apache Software Foundation, http://www.apache.org/

Benchmarking 127.0.0.1 (be patient)
Completed 100 requests
Completed 200 requests
Completed 300 requests
Completed 400 requests
Completed 500 requests
Completed 600 requests
Completed 700 requests
Completed 800 requests
Completed 900 requests
Completed 1000 requests
Finished 1000 requests


Server Software:        myserver/1.0
Server Hostname:        127.0.0.1
Server Port:            46000

Document Path:          /
Document Length:        4 bytes

Concurrency Level:      10
Time taken for tests:   1.884 seconds
Complete requests:      1000
Failed requests:        0
Non-2xx responses:      1000
Total transferred:      115000 bytes
HTML transferred:       4000 bytes
Requests per second:    530.77 [#/sec] (mean)
Time per request:       18.840 [ms] (mean)
Time per request:       1.884 [ms] (mean, across all concurrent requests)
Transfer rate:          59.61 [Kbytes/sec] received

Connection Times (ms)
              min  mean[+/-sd] median   max
Connect:        0   12   91.5      0    1001
Processing:     1    3    2.2      3      42
Waiting:        1    3    2.0      2      42
Total:          2   16   91.7      3    1008
```