

Experiments for IERG4180 project4

I use httpperf to test the performance for the server. The following is using threadpool(size 8), single thread and threadpool(size 20) We can conclude that if the concurrent amount is small, the difference between different model is not too much. But if the concurrent amount is heavy then the threadpool model will have a better performance .

```
du@du-ubuntu22:~$ httpperf --server localhost --port 4080 --num-conns 10 --rate 1 --timeout 5
httpperf --timeout=5 --client=0/1 --server=localhost --port=4080 --uri=/ --rate=1 --send-buffer=4096 --recv-buffer=16384 --num-conns=10 --num-calls=1
httpperf: warning: open file limit > FD_SETSIZE; limiting max. # of open files to FD_SETSIZE
Maximum connect burst length: 1

Total: connections 10 requests 10 replies 10 test-duration 10.002 s

Connection rate: 1.0 conn/s (1000.2 ms/conn, <=2 concurrent connections)
Connection time [ms]: min 1001.2 avg 1001.6 max 1002.3 median 1001.5 stddev 0.3
Connection time [ms]: connect 0.0
Connection length [replies/conn]: 1.000

Request rate: 1.0 req/s (1000.2 ms/req)
Request size [B]: 62.0

Reply rate [replies/s]: min 0.8 avg 0.9 max 1.0 stddev 0.1 (2 samples)
Reply time [ms]: response 1001.5 transfer 0.0
Reply size [B]: header 43.0 content 0.0 footer 0.0 (total 43.0)
Reply status: 1xx=0 2xx=10 3xx=0 4xx=0 5xx=0

CPU time [s]: user 4.94 system 5.03 (user 49.4% system 50.3% total 99.7%)
Net I/O: 0.1 KB/s (0.0*10^6 bps)

Errors: total 0 client-timo 0 socket-timo 0 connrefused 0 connreset 0
Errors: fd-unavail 0 addrunavail 0 ftab-full 0 other 0
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```

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httpperf: warning: open file limit > FD_SETSIZE; limiting max. # of open files to FD_SETSIZE
Maximum connect burst length: 1

Total: connections 10 requests 10 replies 10 test-duration 10.002 s

Connection rate: 1.0 conn/s (1000.2 ms/conn, <=2 concurrent connections)
Connection time [ms]: min 1001.6 avg 1001.8 max 1002.2 median 1001.5 stddev 0.2
Connection time [ms]: connect 0.0
Connection length [replies/conn]: 1.000

Request rate: 1.0 req/s (1000.2 ms/req)
Request size [B]: 62.0

Reply rate [replies/s]: min 0.8 avg 0.9 max 1.0 stddev 0.1 (2 samples)
Reply time [ms]: response 1001.7 transfer 0.0
Reply size [B]: header 43.0 content 0.0 footer 0.0 (total 43.0)
Reply status: 1xx=0 2xx=10 3xx=0 4xx=0 5xx=0

CPU time [s]: user 5.05 system 4.95 (user 50.5% system 49.5% total 100.0%)
Net I/O: 0.1 KB/s (0.0*10^6 bps)

Errors: total 0 client-timo 0 socket-timo 0 connrefused 0 connreset 0
Errors: fd-unavail 0 addrunavail 0 ftab-full 0 other 0
du@du-ubuntu22:~$
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httpperf --timeout=5 --client=0/1 --server=localhost --port=4080 --uri=/ --rate=1 --send-buffer=4096 --recv-buffer=16384 --num-conns=10 --num-calls=1
httpperf: warning: open file limit > FD_SETSIZE; limiting max. # of open files to FD_SETSIZE
Maximum connect burst length: 1

Total: connections 10 requests 10 replies 10 test-duration 10.002 s

Connection rate: 1.0 conn/s (1000.2 ms/conn, <=2 concurrent connections)
Connection time [ms]: min 1001.5 avg 1001.7 max 1002.1 median 1001.5 stddev 0.2
Connection time [ms]: connect 0.0
Connection length [replies/conn]: 1.000

Request rate: 1.0 req/s (1000.2 ms/req)
Request size [B]: 62.0

Reply rate [replies/s]: min 0.8 avg 0.9 max 1.0 stddev 0.1 (2 samples)
Reply time [ms]: response 1001.6 transfer 0.0
Reply size [B]: header 43.0 content 0.0 footer 0.0 (total 43.0)
Reply status: 1xx=0 2xx=10 3xx=0 4xx=0 5xx=0

CPU time [s]: user 4.90 system 5.10 (user 48.9% system 51.0% total 100.0%)
Net I/O: 0.1 KB/s (0.0*10^6 bps)

Errors: total 0 client-timo 0 socket-timo 0 connrefused 0 connreset 0
Errors: fd-unavail 0 addrunavail 0 ftab-full 0 other 0
du@du-ubuntu22:~$
```

Due to time limit , I didn't test different response size. But I think the smaller the response size is , the shorter that the response time is.