Stress tests with Apache Bench

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- date: 2019/09/09
- Apache Bench version: 2.3
- Nginx version: 1.16.1
- Nodejs version: v10.15.0
- MySQL version: 8.0.12_win64
- docker version
  - Engine: 19.03.2
  - Compose: 1.24.1
- Windows version: windows 10_x64 pro build 18950
- note
  - n:指定测试会话使用的请求
  - c:指定一次向服务器发出请求数

statistic server

- n: 100000
- c: 1000
- response: Nginx
- description: performance of static page server

```
Server Software:        nginx/1.16.1
Server Hostname:        localhost
Server Port:            80

Document Path:          /
Document Length:        4290 bytes

Concurrency Level:      1000
Time taken for tests:   193.968 seconds
Complete requests:      100000
Failed requests:        0
Total transferred:      452500000 bytes
HTML transferred:       429000000 bytes
Requests per second:    515.55 [#/sec] (mean)
Time per request:       1939.679 [ms] (mean)
Time per request:       1.940 [ms] (mean, across all concurrent requests)
Transfer rate:          2278.18 [Kbytes/sec] received

Connection Times (ms)
              min  mean[+/-sd] median   max
Connect:        0    2  28.1      0     503
Processing:    63 1909 201.3   1838    2405
Waiting:        1 1148 520.5   1182    1899
Total:         63 1911 202.6   1838    2405

```

```
26   Percentage of the requests served within a certain time (ms)
27     50%    1838
28     66%    1844
29     75%    1856
30     80%    1872
31     90%    2333
32     95%    2339
33     98%    2347
34     99%    2362
35    100%    2405 (longest request)
```

login

- n 100000
- c: 5000
- response: application server program
- description: user login

```
1
2    Server Software:
3    Server Hostname:        localhost
4    Server Port:            4000
5
6    Document Path:          /user/login
7    Document Length:        48 bytes
8
9    Concurrency Level:      5000
10   Time taken for tests:   55.540 seconds
11   Complete requests:      100000
12   Failed requests:        0
13   Total transferred:      19000000 bytes
14   Total body sent:        18700000
15   HTML transferred:       4800000 bytes
16   Requests per second:    1800.50 [#/sec] (mean)
17   Time per request:       2776.999 [ms] (mean)
18   Time per request:       0.555 [ms] (mean, across all concurrent requests)
19   Transfer rate:          334.08 [Kbytes/sec] received
```

```
20                    328.80 kb/s sent

21                    662.88 kb/s total

22

23   Connection Times (ms)

24             min  mean[+/-sd] median    max

25   Connect:        0    0  12.8       0      526

26   Processing:   210 2613 741.3    2700     6055

27   Waiting:       10 1770 785.4    1660     5975

28   Total:        210 2613 741.5    2700     6055

29

30   Percentage of the requests served within a certain time (ms)

31     50%    2700

32     66%    2760

33     75%    3200

34     80%    3220

35     90%    3319

36     95%    3710

37     98%    4615

38     99%    5090

39    100%    6055 (longest request)
```

query public user

- n: 10000
- c: 9000
- response: application server program
- description: query user information

```
1   Server Software:
2   Server Hostname:        localhost
3   Server Port:            4000
4
5   Document Path:          /user/1
6   Document Length:        163 bytes
7
8   Concurrency Level:      9000
```

```
 9  Time taken for tests:    8.209 seconds
10  Complete requests:       10000
11  Failed requests:         0
12  Total transferred:       3060000 bytes
13  HTML transferred:        1630000 bytes
14  Requests per second:     1218.10 [#/sec] (mean)
15  Time per request:        7388.531 [ms] (mean)
16  Time per request:        0.821 [ms] (mean, across all concurrent requests)
17  Transfer rate:           364.00 [Kbytes/sec] received
18
19  Connection Times (ms)
20                min   mean[+/-sd] median    max
21  Connect:        0     1   17.0      0      521
22  Processing:   445  4154 2215.0    4020     7580
23  Waiting:        0  3593 2239.3    3350     7300
24  Total:        445  4154 2215.0    4020     7580
25
26  Percentage of the requests served within a certain time (ms)
27    50%    4020
28    66%    5260
29    75%    5875
30    80%    6460
31    90%    7065
32    95%    7510
33    98%    7550
34    99%    7565
35   100%    7580 (longest request)
```

query item

- n: 100000
- c: 9000
- response: application server program
- description: query item

```
 1  Server Software:
 2  Server Hostname:         localhost
 3  Server Port:             4000
 4
 5  Document Path:           /item/1
 6  Document Length:         237 bytes
 7
 8  Concurrency Level:       9000
 9  Time taken for tests:    45.279 seconds
10  Complete requests:       100000
11  Failed requests:         0
12  Total transferred:       38000000 bytes
13  HTML transferred:        23700000 bytes
14  Requests per second:     2208.51 [#/sec] (mean)
15  Time per request:        4075.153 [ms] (mean)
16  Time per request:        0.453 [ms] (mean, across all concurrent requests)
17  Transfer rate:           819.56 [Kbytes/sec] received
18
19  Connection Times (ms)
20                min   mean[+/-sd] median    max
21  Connect:        0     0    5.3      0      521
```

```
22   Processing:   2010 3663 660.1    3730      7070
23   Waiting:         0 3481 674.3    3611      6790
24   Total:        2010 3663 660.2    3730      7070
25
26   Percentage of the requests served within a certain time (ms)
27     50%    3730
28     66%    3760
29     75%    3775
30     80%    3785
31     90%    3845
32     95%    4195
33     98%    6105
34     99%    6600
35    100%    7070 (longest request)
```

file image load

- n: 100000
- c: 9000
- response: Nginx
- description: resource file serve

```
 1   Server Software:        nginx/1.16.1
 2   Server Hostname:        localhost
 3   Server Port:            80
 4
 5   Document Path:          /image/item/1-1-0.jpg
 6   Document Length:        11242 bytes
 7
 8   Concurrency Level:      9000
 9   Time taken for tests:   169.232 seconds
10   Complete requests:      100000
11   Failed requests:        0
12   Total transferred:      1147900000 bytes
13   HTML transferred:       1124200000 bytes
14   Requests per second:    590.91 [#/sec] (mean)
15   Time per request:       15230.841 [ms] (mean)
16   Time per request:       1.692 [ms] (mean, across all concurrent requests)
17   Transfer rate:          6624.04 [Kbytes/sec] received
18
19   Connection Times (ms)
20               min  mean[+/-sd] median    max
21   Connect:       0    1  25.9      0      531
22   Processing:  610 14258 2558.5  14650    17940
23   Waiting:       0 7405 4401.9   7255    17500
24   Total:       610 14260 2558.5  14650    17980
25
26   Percentage of the requests served within a certain time (ms)
27     50%   14650
28     66%   14940
29     75%   15020
30     80%   15055
31     90%   15332
32     95%   16490
33     98%   17310
34     99%   17515
```

```
35    100%  17980 (longest request)
```

message fetch

- n: 100000
- c: 9000
- response: application server program
- description: fetch message

```
 1   Server Software:
 2   Server Hostname:        localhost
 3   Server Port:            4000
 4
 5   Document Path:          /user/chat/fetchnew
 6   Document Length:        9 bytes
 7
 8   Concurrency Level:      9000
 9   Time taken for tests:   188.531 seconds
10   Complete requests:      100000
11   Failed requests:        0
12   Non-2xx responses:      100000
13   Total transferred:      15100000 bytes
14   Total body sent:        32900000
15   HTML transferred:       900000 bytes
16   Requests per second:    530.42 [#/sec] (mean)
17   Time per request:       16967.759 [ms] (mean)
18   Time per request:       1.885 [ms] (mean, across all concurrent requests)
19   Transfer rate:          78.22 [Kbytes/sec] received
20                           170.42 kb/s sent
21                           248.63 kb/s total
22
23   Connection Times (ms)
24               min  mean[+/-sd] median    max
25   Connect:        0    2  28.8       0      525
26   Processing:   475 16182 2774.5   16785    18000
27   Waiting:        0 8682 4914.4    8550    17465
28   Total:        475 16184 2774.5   16785    18000
29
30   Percentage of the requests served within a certain time (ms)
31     50%  16785
32     66%  16850
33     75%  17220
34     80%  17261
35     90%  17305
36     95%  17450
37     98%  17670
38     99%  17805
39    100%  18000 (longest request)
```