



中山大學
SUN YAT-SEN UNIVERSITY

《分布式计算》

负载均衡与缓存

学院名称：数据科学与计算机学院

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使用 ab 测试 <http://localhost:8080/gtvg> 结果如下：

```
Concurrency Level:      10
Time taken for tests:    2.591 seconds
Complete requests:      1000
Failed requests:         0
Total transferred:      1485000 bytes
HTML transferred:       1234000 bytes
Requests per second:    385.90 [#/sec] (mean)
Time per request:       25.913 [ms] (mean)
Time per request:       2.591 [ms] (mean, across all concurrent requests)
Transfer rate:          559.63 [Kbytes/sec] received

Connection Times (ms)
              min    mean[+/-sd] median    max
Connect:        0      1   0.9      1      13
Processing:      2     25  37.2     14     354
Waiting:         0     20  35.3     11     353
Total:           2     25  37.3     15     354

Percentage of the requests served within a certain time (ms)
 50%      15
 66%      25
 75%      32
 80%      35
 90%      44
 95%      68
 98%     148
 99%     261
100%     354 (longest request)
```

在并发数为 10，总请求数为 1000 的请求中，对首页的访问的总时间仅为 2.591 秒

测试 <http://localhost:8080/gtvg/product/list> 结果如下：

```

Concurrency Level:      10
Time taken for tests:   70.763 seconds
Complete requests:      1000
Failed requests:        928
    (Connect: 0, Receive: 0, Length: 928, Exceptions: 0)
Non-2xx responses:      928
Total transferred:      24914811 bytes
HTML transferred:       24727843 bytes
Requests per second:    14.13 [#/sec] (mean)
Time per request:       707.631 [ms] (mean)
Time per request:       70.763 [ms] (mean, across all concurrent requests)
Transfer rate:          343.84 [Kbytes/sec] received

Connection Times (ms)
      min    mean[+/-sd] median    max
Connect:    0      0  0.4      1      10
Processing: 177    706 533.0    557    4777
Waiting:    177    706 533.0    556    4777
Total:      177    707 533.0    557    4778
ERROR: The median and mean for the initial connection time are more than twice the standard
       deviation apart. These results are NOT reliable.

Percentage of the requests served within a certain time (ms)
 50%    557
 66%    657
 75%    759
 80%    830
 90%   1187
 95%   1725
 98%   2585
 99%   3163
100%   4778 (longest request)

```

而在相同并发数和相同请求数的情况下,服务器响应 product/list 的时间达到了 70.763 秒,可见对数据库的访问操作将远远增加服务器的响应时间。