# Nginx、swoole、golang web性能测试

目录

[Nginx、swoole、golang web性能测试 1](#_Toc520994926)

[机器配置： 1](#_Toc520994927)

[swoole 不使用mysql 连接池 2](#_Toc520994928)

[swoole 使用mysql 连接池 3](#_Toc520994929)

[nginx + fastCGI + php 5](#_Toc520994930)

## 机器配置：

**Cpu配置: 单核cpu**

$ lscpu

Architecture: x86\_64

CPU op-mode(s): 32-bit, 64-bit

Byte Order: Little Endian

CPU(s): 1

On-line CPU(s) list: 0

Thread(s) per core: 1

Core(s) per socket: 1

Socket(s): 1

NUMA node(s): 1

Vendor ID: GenuineIntel

CPU family: 6

Model: 69

Stepping: 1

CPU MHz: 2494.258

BogoMIPS: 4988.51

Hypervisor vendor: VMware

Virtualization type: full

L1d cache: 32K

L1i cache: 32K

L2 cache: 256K

L3 cache: 3072K

NUMA node0 CPU(s): 0

**内存配置：1.5G内存**

$ free -mh

total used free shared buffers cached

Mem: 1.5G 1.2G 229M 13M 241M 442M

-/+ buffers/cache: 572M 912M

Swap: 1.9G 0B 1.9G

**测试情况：(2000 个并发，10000 http请求基准测试，分析QPS)**

1. swoole 不使用mysql 连接池
2. swoole 使用mysql 连接池
3. nginx +fastCGI+ php

## swoole 不使用mysql 连接池

ab -c 2000 -n 10000 http://192.168.132.128:9502/

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Benchmarking 192.168.132.128 (be patient)

Completed 1000 requests

Completed 2000 requests

Completed 3000 requests

Completed 4000 requests

Completed 5000 requests

Completed 6000 requests

Completed 7000 requests

Completed 8000 requests

Completed 9000 requests

Completed 10000 requests

Finished 10000 requests

Server Software: swoole-http-server

Server Hostname: 192.168.132.128

Server Port: 9502

Document Path: /

Document Length: 31836 bytes

Concurrency Level: 2000

Time taken for tests: 25.084 seconds

Complete requests: 10000

Failed requests: 0

Write errors: 0

Total transferred: 319870000 bytes

HTML transferred: 318360000 bytes

Requests per second: 398.65 [#/sec] (mean)

Time per request: 5016.899 [ms] (mean)

Time per request: 2.508 [ms] (mean, across all concurrent requests)

Transfer rate: 12452.83 [Kbytes/sec] received

Connection Times (ms)

min mean[+/-sd] median max

Connect: 0 36 73.8 0 267

Processing: 272 4529 1350.9 4981 5743

Waiting: 0 4524 1353.3 4977 5734

Total: 359 4565 1298.1 4981 5744

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

50% 4981

66% 5253

75% 5387

80% 5448

90% 5549

95% 5614

98% 5680

99% 5699

100% 5744 (longest request)

## swoole 使用mysql 连接池

$ ab -c 2000 -n 10000 http://192.168.132.128:9501/

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Benchmarking 192.168.132.128 (be patient)

Completed 1000 requests

Completed 2000 requests

Completed 3000 requests

Completed 4000 requests

Completed 5000 requests

Completed 6000 requests

Completed 7000 requests

Completed 8000 requests

Completed 9000 requests

Completed 10000 requests

Finished 10000 requests

Server Software: swoole-http-server

Server Hostname: 192.168.132.128

Server Port: 9501

Document Path: /

Document Length: 31836 bytes

Concurrency Level: 2000

Time taken for tests: 23.210 seconds

Complete requests: 10000

Failed requests: 0

Write errors: 0

Total transferred: 319870000 bytes

HTML transferred: 318360000 bytes

Requests per second: 430.84 [#/sec] (mean)

Time per request: 4642.044 [ms] (mean)

Time per request: 2.321 [ms] (mean, across all concurrent requests)

Transfer rate: 13458.43 [Kbytes/sec] received

Connection Times (ms)

min mean[+/-sd] median max

Connect: 0 28 56.2 0 189

Processing: 181 4151 1130.7 4572 5102

Waiting: 0 4146 1131.2 4568 5099

Total: 272 4178 1090.6 4572 5102

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

50% 4572

66% 4655

75% 4705

80% 4756

90% 4878

95% 4961

98% 5035

99% 5065

100% 5102 (longest request)

## nginx + fastCGI + php

nginx 开启4 个worker 进程

fastCGI 初始化5 个进程，最大进程数1024

s

$ ab -c 2000 -n 10000 http://192.168.132.128:9508/pool/sync-mysql.php

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Benchmarking 192.168.132.128 (be patient)

Completed 1000 requests

Completed 2000 requests

Completed 3000 requests

Completed 4000 requests

Completed 5000 requests

Completed 6000 requests

Completed 7000 requests

Completed 8000 requests

Completed 9000 requests

Completed 10000 requests

Finished 10000 requests

Server Software: nginx

Server Hostname: 192.168.132.128

Server Port: 9508

Document Path: /pool/sync-mysql.php

Document Length: 31836 bytes

Concurrency Level: 2000

Time taken for tests: 15.746 seconds

Complete requests: 10000

Failed requests: 5171

(Connect: 0, Receive: 0, Length: 5171, Exceptions: 0)

Write errors: 0

Non-2xx responses: 5171

Total transferred: 156203787 bytes

HTML transferred: 154594430 bytes

Requests per second: 635.07 [#/sec] (mean)

Time per request: 3149.253 [ms] (mean)

Time per request: 1.575 [ms] (mean, across all concurrent requests)

Transfer rate: 9687.55 [Kbytes/sec] received

Connection Times (ms)

min mean[+/-sd] median max

Connect: 0 618 497.4 558 2345

Processing: 1 2278 1592.1 2123 8568

Waiting: 0 1509 1055.8 1533 7294

Total: 2 2896 1845.8 2738 9694

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

50% 2738

66% 3974

75% 4544

80% 4852

90% 5242

95% 5575

98% 6561

99% 6732

100% 9694 (longest request)