Nginx 优化参数

server\_names\_hash\_bucket\_size 128 （32倍数）

保存服务器名字的hash表是由指令 server\_names\_hash\_max\_size 和 server\_names\_hash\_bucket\_size所控制的。参数hash bucket size总是等于hash表的大小，并且是一路处理器缓存大小的倍数。在减少了在内存中的存取次数后，使在处理器中加速查找hash表键值成为可能。如果 hash bucket size等于一路处理器缓存的大小，那么在查找键的时候，最坏的情况下在内存中查找的次数为2。第一次是确定存储单元的地址，第二次是在存储单元中查找键值。因此，如果Nginx给出需要增大 hash max size 或 hash bucket size的提示，那么首要的是增大前一个参数的大小.

414 Request-URI Too Large

Nginx 优化 www apiguess

Nginx配置文件

worker\_processes 2;

worker\_cpu\_affinity 0001 0010;

error\_log /var/log/nginx/error.log;

pid /usr/local/nginx/nginx.pid;

worker\_rlimit\_nofile 204800;

events {

worker\_connections 204800;

multi\_accept on;

use epoll;

}

http {

include mime.types;

default\_type application/octet-stream;

log\_format main '$remote\_addr - $remote\_user [$time\_local] "$request" '

'$status $body\_bytes\_sent "$http\_referer" '

'"$http\_user\_agent" "$http\_x\_forwarded\_for" $request\_time $upstream\_response\_time';

server\_names\_hash\_bucket\_size 128;

client\_header\_buffer\_size 2k;

large\_client\_header\_buffers 4 4k;

client\_max\_body\_size 100M;

sendfile on;

server\_tokens off;

tcp\_nopush on;

tcp\_nodelay on;

keepalive\_timeout 30;

fastcgi\_connect\_timeout 300;

fastcgi\_send\_timeout 300;

fastcgi\_read\_timeout 300;

fastcgi\_buffer\_size 128k;

fastcgi\_buffers 8 128k;

fastcgi\_busy\_buffers\_size 256k;

fastcgi\_temp\_file\_write\_size 256k;

set\_real\_ip\_from 100.109.0.0/16;

real\_ip\_header X-Forwarded-For;

# fastcgi\_cache\_path /usr/local/nginx/fastcgi\_cache levels=1:2 keys\_zone=TEST:10m inactive=5m;

# fastcgi\_cache TEST;

# fastcgi\_cache\_valid 200 302 1h;

# fastcgi\_cache\_valid 301 1d;

# fastcgi\_cache\_valid any 1m;

# fastcgi\_cache\_min\_uses 1;

# fastcgi\_cache\_use\_stable error timeout invalid\_header http500;

open\_file\_cache max=204800 inactive=20s;

open\_file\_cache\_min\_uses 1;

open\_file\_cache\_valid 30s;

gzip on;

gzip\_min\_length 1k;

gzip\_buffers 4 16k;

gzip\_http\_version 1.0;

gzip\_comp\_level 2;

gzip\_types text/plain application/x-javascript text/css application/xml text/javascript application/

x-httpd-php image/jpeg image/gif image/png image/jpg;

gzip\_vary on;

gzip\_disable "MSIE [1-6]\.";

server {

listen 80;

server\_name 127.0.0.1 localhost;

location /nginx\_status {

stub\_status on;

access\_log off;

# allow 127.0.0.1;

# deny all;

}

}

include /usr/local/nginx/conf/vhost/\*.conf;

}

[root@testweb2 /usr/local/nginx/conf/vhost]# cat apiguess.conf

server {

listen 80;

server\_name testguess.wankr.com.cn;

root /var/www/guess\_online/guess/Api;

index index.php index.htm index.html;

# location ~\* favicon.ico$ {

# rewrite ^(.\*) /favicon.ico break;

# }

location / {

rewrite ^/(.\*)/(.\*)$ "/index.php?m=$1&a=$2" last;

# rewrite ^/(.\*)$ /$1 break;

}

location ^~ /.svn/ {

deny all;

}

location ~ \.php$ {

fastcgi\_pass 127.0.0.1:9000;

fastcgi\_param SCRIPT\_FILENAME $document\_root$fastcgi\_script\_name;

include fastcgi\_params;

}

location ~ .\*\.(gif|jpg|jpeg|png|bmp|swf|js|css)$ {

expires 30d;

}

access\_log /var/log/nginx/apiguess.log main;

}

内核优化

net.ipv4.tcp\_max\_tw\_buckets = 6000

net.ipv4.tcp\_sack = 1

net.ipv4.tcp\_window\_scaling = 1

net.ipv4.tcp\_rmem = 4096 87380 4194304

net.ipv4.tcp\_wmem = 4096 16384 4194304

net.core.wmem\_default = 8388608

net.core.rmem\_default = 8388608

net.core.rmem\_max = 16777216

net.core.wmem\_max = 16777216

net.core.netdev\_max\_backlog = 262144

net.core.somaxconn = 262144

net.ipv4.tcp\_max\_orphans = 3276800

net.ipv4.tcp\_max\_syn\_backlog = 262144

net.ipv4.tcp\_timestamps = 0

net.ipv4.tcp\_syn\_retries = 1

net.ipv4.tcp\_tw\_recycle = 1

net.ipv4.tcp\_tw\_reuse = 1

net.ipv4.tcp\_mem = 94500000 915000000 927000000

net.ipv4.tcp\_fin\_timeout = 1

net.ipv4.tcp\_keepalive\_time = 30

net.ipv4.ip\_local\_port\_range = 1024 65000

压测结果

一台slb带台端2台服务器

通过两台服务器进行压力测试

Server Software:

Server Hostname: testguess.wankr.com.cn

Server Port: 80

Document Path: /test/test

Document Length: 17590 bytes

Concurrency Level: 600

Time taken for tests: 20.455 seconds

Complete requests: 2000

Failed requests: 1999

(Connect: 0, Receive: 0, Length: 1999, Exceptions: 0)

Write errors: 0

Non-2xx responses: 296

Total transferred: 44770443 bytes

HTML transferred: 43963459 bytes

Requests per second: 97.77 [#/sec] (mean)

Time per request: 6136.613 [ms] (mean)

Time per request: 10.228 [ms] (mean, across all concurrent requests)

Transfer rate: 2137.39 [Kbytes/sec] received

Connection Times (ms)

min mean[+/-sd] median max

Connect: 0 4 5.3 0 16

Processing: 47 4749 2061.8 4312 15141

Waiting: 23 4217 1878.4 3821 14818

Total: 47 4753 2060.4 4313 15152

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

50% 4313

66% 5265

75% 5869

80% 6540

90% 7716

95% 8612

98% 9916

99% 10117

100% 15152 (longest request)

Server Software:

Server Hostname: testguess.wankr.com.cn

Server Port: 80

Document Path: /test/test

Document Length: 48612 bytes

Concurrency Level: 600

Time taken for tests: 26.318 seconds

Complete requests: 2000

Failed requests: 1999

(Connect: 0, Receive: 0, Length: 1999, Exceptions: 0)

Write errors: 0

Non-2xx responses: 377

Total transferred: 43090784 bytes

HTML transferred: 42309801 bytes

Requests per second: 75.99 [#/sec] (mean)

Time per request: 7895.327 [ms] (mean)

Time per request: 13.159 [ms] (mean, across all concurrent requests)

Transfer rate: 1598.95 [Kbytes/sec] received

Connection Times (ms)

min mean[+/-sd] median max

Connect: 0 4 4.6 1 16

Processing: 576 4813 2433.9 4087 14647

Waiting: 559 4299 2198.1 3591 14646

Total: 577 4816 2434.0 4089 14647

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

50% 4089

66% 5057

75% 5730

80% 6450

90% 7709

95% 10041

98% 13340

99% 13559

100% 14647 (longest request)

然后后端返回状态

[root@testweb1 ~]# awk '{print $9}' /var/log/nginx/apiguess.log |sort |uniq -c |sort -nr

1650 200

350 502

[root@testweb2 ~]# awk '{print $9}' /var/log/nginx/apiguess.log |sort |uniq -c |sort -nr

1677 200

323 502

如果并发2000

Concurrency Level: 2000

Time taken for tests: 10.538 seconds

Complete requests: 2000

Failed requests: 1999

(Connect: 0, Receive: 0, Length: 1999, Exceptions: 0)

Write errors: 0

Non-2xx responses: 94

Total transferred: 50502782 bytes

HTML transferred: 49630956 bytes

Requests per second: 189.78 [#/sec] (mean)

Time per request: 10538.452 [ms] (mean)

Time per request: 5.269 [ms] (mean, across all concurrent requests)

Transfer rate: 4679.92 [Kbytes/sec] received

Connection Times (ms)

min mean[+/-sd] median max

Connect: 0 39 7.7 39 53

Processing: 102 6845 2608.9 6938 10440

Waiting: 25 6490 2694.8 6765 10440

Total: 102 6885 2602.6 6975 10471

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

50% 6975

66% 8811

75% 9393

80% 9535

90% 10012

95% 10278

98% 10381

99% 10407

100% 10471 (longest request)

两台服务器每台服务器并发800的情况下

Requests per second: 142.58

Web1 状态

3326 200

1687 502

Web2 状态

3506 200

1486 502

16 499