

# 压测数据

## 首次发生队列

```
root@qdd004-backend-dev-php7:/data/game/lgy/h5game/caroline# /usr/local/bin/apach
This is ApacheBench, Version 2.3 <$Revision: 1528965 $>
Copyright 1996 Adam Twiss, Zeus Technology Ltd, http://www.zeustech.net/
Licensed to The Apache Software Foundation, http://www.apache.org/

Benchmarking lrsphp7s1.soulgame.com (be patient)
Completed 100 requests
Completed 200 requests
Completed 300 requests
Completed 400 requests
Completed 500 requests
Completed 600 requests
Completed 700 requests
Completed 800 requests
Completed 900 requests
Completed 1000 requests
Finished 1000 requests


Server Software:      nginx/1.6.2
Server Hostname:      lrsphp7s1.soulgame.com
Server Port:          80


Document Path:        /lgy/h5game/caroline/api/web/index.php?c=battle
Document Length:      187 bytes


Concurrency Level:    50
Time taken for tests:  0.948 seconds
Complete requests:    1000
Failed requests:       0
Total transferred:    470000 bytes
HTML transferred:     187000 bytes
Requests per second:  1054.46 [#/sec] (mean)
Time per request:     47.418 [ms] (mean)
Time per request:     0.948 [ms] (mean, across all concurrent requests)
Transfer rate:        483.98 [Kbytes/sec] received


Connection Times (ms)
      min      mean[+/-sd] median    max
Connect:    0       0   0.3      0      2
Processing:  3      47  76.1     15     484
Waiting:    3      47  76.1     15     484
```

Total: 3 47 76.2 15 484

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

50%	15
66%	30
75%	45
80%	62
90%	132
95%	209
98%	335
99%	392
100%	484 (longest request)

队列剩余长度: 1000

执行时间: 369ms 队列剩余长度: 0

## 失败队列处理

```
root@qdd004-backend-dev-php7:~# /usr/local/php/bin/php /data/game/lgy/h5game/
This is ApacheBench, Version 2.3 <$Revision: 1528965 $>
Copyright 1996 Adam Twiss, Zeus Technology Ltd, http://www.zeustech.net/
Licensed to The Apache Software Foundation, http://www.apache.org/
```

Benchmarking lrsphp7s1.soulgame.com (be patient)

```
Completed 100 requests
Completed 200 requests
Completed 300 requests
Completed 400 requests
Completed 500 requests
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Completed 700 requests
Completed 800 requests
Completed 900 requests
Completed 1000 requests
Finished 1000 requests
```

```
Server Software:      nginx/1.6.2
Server Hostname:      lrsphp7s1.soulgame.com
Server Port:          80
```

```
Document Path:        /lgy/h5game/caroline/api/web/index.php?c=battle
Document Length:      187 bytes
```

```
Concurrency Level:    50
Time taken for tests:  1.019 seconds
```

```
Complete requests:      1000
Failed requests:        0
Total transferred:      470000 bytes
HTML transferred:       187000 bytes
Requests per second:    981.18 [#/sec] (mean)
Time per request:       50.959 [ms] (mean)
Time per request:       1.019 [ms] (mean, across all concurrent requests)
Transfer rate:          450.34 [Kbytes/sec] received
```

#### Connection Times (ms)

	min	mean[+/-sd]	median	max
Connect:	0	0 0.4	0	2
Processing:	4	50 78.2	17	730
Waiting:	4	50 78.2	17	730
Total:	4	50 78.3	17	732

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

50%	17
66%	36
75%	60
80%	76
90%	130
95%	214
98%	297
99%	333
100%	732 (longest request)

队列剩余长度: 1000

执行时间: 69ms 队列剩余长度: 0

失败队列剩余长度: 53

执行时间: 340ms 失败队列剩余长度: 0

## 首次发送队列

异步客户端发送战报任务命令 (运行时间目前控制在300s, 线上环境命令)

```
/usr/local/php/bin/php /data/game/caroline/caroline/console/console.php
```

调试模式(先压入测试数据, 处理完成后所有线程退出)参数Debug,默认false,不开启

```
/usr/local/php/bin/php /data/game/caroline/caroline/console/console.php
```

指定压入数据量参数Lenth，默认值1000

```
/usr/local/php/bin/php /data/game/caroline/caroline/console/console.php
```

指定测试用户量参数UserId,默认值11172325

```
/usr/local/php/bin/php /data/game/caroline/caroline/console/console.php
```

线程数限制控制在10，1000条数据，执行总时间在578ms，计算得到1730QPS;开启20时，执行总时间351ms, 计算得到2849QPS。以目前php-fpm负载线上能力（PB协议解决后，会至少提示1倍）1000多QPS, 开20个线程足够。

```
队列剩余长度: 1000  
执行时间: 351ms 队列剩余长度: 0
```

## 失败队列处理

压测模式(先模拟压测失败数据)

```
/usr/local/php/bin/php /data/game/caroline/caoline/console/console.php
```

指定测试用户量参数UserId,默认值11172325

```
/usr/local/php/bin/php /data/game/caroline/caroline/console/console.php
```

指定压入数据量参数Lenth，默认值1000

```
/usr/local/php/bin/php /data/game/caroline/caroline/console/console.php
```

## 环境安装

目前线上运行和给的文档都是php 非线程安全模式，线程安全模式会代码安全监测的消耗，对应php-fpm模式（单线程）是多余且浪费的，所以应当另外编译php的线程安全模式的cli可执行程序

## PHP Cli 线程安全源码安装

版本： php-7.1.20 安装包： 邮件中附件提供， 或可在github.com下载 依赖库

```
yum install libxml2-devel openssl-devel libcurl-devel libmcrypt-devel
```

```
tar -xf php-7.1.20.tar.gz
cd php-7.1.20
./configure --prefix=/usr/local/php --with-config-file-path=/usr/local,
make && make install
```

安装过程中如果提示依赖库不存在，根据提示自行安装

安装完成后， /usr/local/php下会有如下目录和文件

```
root@qdd004-backend-dev-php7:~/lgy# ls /usr/local/php
bin  etc  include  lib  php  sbin  var
```

在源码安装目录下复制php.ini-production到/usr/local/php/etc下，并重名php.ini

### 安装检查

检查配置文件路径

```
root@qdd004-backend-dev-php7:~/lgy/php-7.1.20# /usr/local/php/bin/php --
Configuration File (php.ini) Path: /usr/local/php/etc
Loaded Configuration File:      /usr/local/php/etc/php.ini
Scan for additional .ini files in: (none)
Additional .ini files parsed:   (none)
```

Configuration File (php.ini)正确值： /usr/local/php/etc/php.ini

避免加载到php-fpm模式的配置文件

### 扩展检查

```
root@qdd004-backend-dev-php7:~/lgy/php-7.1.20# /usr/local/php/bin/php -r
[PHP Modules]
```

bcmath  
Core  
ctype  
curl  
date  
dom  
filter  
ftp  
gd  
gettext  
hash  
iconv  
json  
libxml  
mbstring  
mcrypt  
mysqli  
mysqlnd  
openssl  
pcntl  
pcre  
PDO  
pdo\_mysql  
pdo\_sqlite  
Phar  
posix  
*<!--threads-->*  
*<!--redis-->*  
Reflection  
session  
shmop  
SimpleXML  
soap  
sockets  
SPL  
sqlite3  
standard  
sysvsem  
tokenizer  
xml  
xmlreader  
xmlrpc  
xmlwriter  
zip  
zlib

[Zend Modules]

php默认是没有安装redis和pthreads扩展的

## redis扩展安装

版本：redis-4.1.0

```
tar -xf redis-4.1.0.tgz
cd redis-4.1.0
/usr/local/php/bin/phpize
./configure --with-php-config=/usr/local/php/bin/php-config
make && make install
echo "extension=redis.so" >> /usr/local/php/etc/php.ini
```

## pthreads安装

由于php7.1.x中官方提供pthreads扩展zend语法不兼容，需要进行修改，修改后的git地址 <https://github.com/sjdskl/pthreads-php7.1.git>

```
git clone https://github.com/sjdskl/pthreads-php7.1.git
cd pthreads-php7.1
/usr/local/php/bin/phpize
./configure --with-php-config=/usr/local/php/bin/php-config
echo "extension=pthreads.so" >> /usr/local/php/etc/php.ini
```

测试：在examples目录下有许多测试文件

```
cd examples
root@qd004-backend-dev-php7:~/lgy/php-7.1.20/ext/pthreads-php7.1/exam
Start(100) ..... 954.737 tps
```

## supervisor

由于php的redis连接和mysql连接在长时间运行时中断，所以异步脚本运行时间设置为300s，退出后通过supervisor拉起，所以以上脚本仍加入到supervisor进程管理中

解压php后端程序缩包后,复制进程配置文件到supervisor下

```
ls /data/game/caroline/caroline/console/supervisor/
```

```
caroline.conf
```

```
cp /data/game/caroline/caoline/console/supervisor/* /etc/supervisor/confd
```

## 更新和重启进程

```
supervisorctl update  
supervisorctl restart all
```

## 代码部署配置文件简化

```
<?php  
/** [CHANGE]  
 * 数据中心分配的应用ID,  
 * 卡洛琳分配的是2, 卡洛琳闯关模式为102,  
 * 具体参见数据库h5_common.`app`表, 用于获取应用配置信息,  
 * 比如触手*通讯的appkey和appsecret等  
 */  
define('APPID', 2);  
  
/**[CHANGE]  
 * 触手API 接口地址, 以下为触手测试环境地址,  
 * 如需上线, 请修改为正式地址  
 * */  
define('CHUSHOU_API_URL', "http://open-game-report.vchushou.com/");  
  
//应用信息  
define('APP_INFO', [  
    'app_desc'=>'卡洛琳',  
    '_xappkey'=>'LPPHDZSFUKMKVPBS',  
    '_xappsecret'=>'K3PMXLF7C%UA%_#AY8&ACHZL&(''  
]);  
  
//skynet网关推送配置, 如无skynet, 可忽略  
define('PUSH_IP', '10.31.240.81');  
define('PUSH_PORT', 8021);  
  
//DB配置  
define('DB_HOST', 'localhost');  
define('DB_NAME', 'h5_common');  
define('DB_USER', 'lgy');  
define('DB_PASSWORD', 'a1s2d3f4');  
  
//Redis配置
```



```
define('REDIS_HOST', 'localhost');
define('REDIS_PORT', 6379);
define('REDIS_PASSWORD', 'SjhkHD3J5k6H8SjSbK3SC');
define('REDIS_PREFIX', 'caroline_');

...
```

改动：配置节点的变化统一到常量定义，包含redis和mysql

其他

apcu扩展安装，yum安装和源码均可，安装目标php-fpm的可执行程序/usr/bin/php

## 注意

php线程安全可执行程序：/usr/local/php/bin/php

php非线程安全可执行程序：/usr/bin/php

## 监控

首次队列进程数

```
[root@qd006-chushou-centos7 ~]# ps -ef|grep "console.php job MultiThread"
1
```

ps -ef|grep "console.php job MultiThread"|wc -l 的执行结果需大于等于1

失败队列进程数

```
[root@qd006-chushou-centos7 ~]# ps -ef|grep "console.php job FailedMultiThread"
1
```

ps -ef|grep "console.php job FailedCBMultiThread"|wc -l 的执行结果需大于等于1