

# MySQL+NoSQL (Redis)

## 1. 安装 gcc\*

```
已安装:
gcc.x86_64 0:4.4.7-16.el6      gcc-c++.x86_64 0:4.4.7-16.el6      gcc-gfortran.x86_64 0:4.4.7-16.el6      gcc-gnat.x86_64 0:4.4.7-16.el6
gcc-java.x86_64 0:4.4.7-16.el6  gcc-objc.x86_64 0:4.4.7-16.el6      gcc-objc++.x86_64 0:4.4.7-16.el6

作为依赖被安装:
clog-ppl.x86_64 0:0.15.7-1.2.el6  cpp.x86_64 0:4.4.7-16.el6      ecj.x86_64 1:3.4.2-6.el6      java-1.5.0-gcj.x86_64 0:1.5.0-0-29.1.el6
java_cup.x86_64 1:0.10k-5.el6      libgcj.x86_64 0:4.4.7-16.el6      libgcj-devel.x86_64 0:4.4.7-16.el6      libgnat.x86_64 0:4.4.7-16.el6
libgnat-devel.x86_64 0:4.4.7-16.el6  libobjc.x86_64 0:4.4.7-16.el6      libstdc++-devel.x86_64 0:4.4.7-16.el6      mpfr.x86_64 0:2.4.1-6.el6
ppl.x86_64 0:0.10.2-11.el6      sinjdoc.x86_64 0:0.5-9.1.el6      zlib-devel.x86_64 0:1.2.3-29.el6

完毕!
[root@lym ~]# yum -y install gcc*
```

## 2. 安装所需要的包

```
[root@lym ~]# cd /media/
[root@lym media]# ls
autoconf-2.63-5.1.el6.noarch.rpm      libgfortran-4.4.7-17.el6.x86_64.rpm      php-cli-5.3.3-47.el6.x86_64.rpm
automake-1.11.1-4.el6.noarch.rpm      libgnat-4.4.7-17.el6.x86_64.rpm          php-common-5.3.3-47.el6.x86_64.rpm
clog-ppl-0.15.7-1.2.el6.x86_64.rpm    libgnat-devel-4.4.7-17.el6.x86_64.rpm    php-dba-5.3.3-47.el6.x86_64.rpm
cpp-4.4.7-17.el6.x86_64.rpm           libgomp-4.4.7-17.el6.x86_64.rpm          php-devel-5.3.3-47.el6.x86_64.rpm
ecj-3.4.2-6.el6.x86_64.rpm            libobjc-4.4.7-17.el6.x86_64.rpm          php-enchant-5.3.3-47.el6.x86_64.rpm
gcc-4.4.7-17.el6.x86_64.rpm           libstdc++-4.4.7-17.el6.x86_64.rpm        php-fpm-5.3.3-47.el6.x86_64.rpm
gcc-c++-4.4.7-17.el6.x86_64.rpm       libstdc++-devel-4.4.7-17.el6.x86_64.rpm  php-gd-5.3.3-47.el6.x86_64.rpm
gcc-gfortran-4.4.7-17.el6.x86_64.rpm  libXpm-3.5.10-2.el6.x86_64.rpm           php-mbstring-5.3.3-47.el6.x86_64.rpm
gcc-gnat-4.4.7-17.el6.x86_64.rpm      mpfr-2.4.1-6.el6.x86_64.rpm             php-mysql-5.3.3-47.el6.x86_64.rpm
gcc-java-4.4.7-17.el6.x86_64.rpm      mysql-5.1.73-7.el6.x86_64.rpm           php-pdo-5.3.3-47.el6.x86_64.rpm
gcc-objc-4.4.7-17.el6.x86_64.rpm      mysql-libs-5.1.73-7.el6.x86_64.rpm       phpredis-master.zip
gcc-objc++-4.4.7-17.el6.x86_64.rpm    mysql-server-5.1.73-7.el6.x86_64.rpm    php-xml-5.3.3-47.el6.x86_64.rpm
java-1.5.0-gcj-1.5.0-0-29.1.el6.x86_64.rpm  nginx-1.10.1-1.el6ngx.x86_64.rpm      php-xmlrpc-5.3.3-47.el6.x86_64.rpm
libgcc-4.4.7-17.el6.x86_64.rpm        perl-DBD-MySQL-4.013-3.el6.x86_64.rpm   ppl-0.10.2-11.el6.x86_64.rpm
libgcj-4.4.7-17.el6.x86_64.rpm        perl-DBI-1.609-4.el6.x86_64.rpm         redis-2.8.19.tar.gz
libgcj-devel-4.4.7-17.el6.x86_64.rpm  php-5.3.3-47.el6.x86_64.rpm            sinjdoc-0.5-9.1.el6.x86_64.rpm
libhcmath-5.3.3-47.el6.x86_64.rpm      php-bcmath-5.3.3-47.el6.x86_64.rpm      zlib-devel-1.2.3-29.el6.x86_64.rpm
[root@lym media]#
ppl.x86_64 0:0.10.2-11.el6      sinjdoc.x86_64 0:0.5-9.1.el6
zlib-devel.x86_64 0:1.2.3-29.el6

Dependency Installed:
apr.x86_64 0:1.3.9-5.el6_2
apr-util.x86_64 0:1.3.9-3.el6_0.1
apr-util-ldap.x86_64 0:1.3.9-3.el6_0.1
enchant.x86_64 1:1.5.0-5.el6
httpd.x86_64 0:2.2.15-45.el6.centos
httpd-tools.x86_64 0:2.2.15-45.el6.centos

Updated:
libgcc.x86_64 0:4.4.7-17.el6      libgfortran.x86_64 0:4.4.7-17.el6
libgomp.x86_64 0:4.4.7-17.el6      libstdc++.x86_64 0:4.4.7-17.el6
mysql-libs.x86_64 0:5.1.73-7.el6

Complete!
[root@lym media]# yum -y install *_
```

## 3. 配置网站 nginx 并启动 nginx

### a. vim /etc/nginx/nginx.conf

```
31 include /etc/nginx/conf.d/*.conf;
32
```

主配置文件中没有server区域，需要到这里去

vim /etc/nginx/conf.d/default.conf

```

1 server {
2     listen      80;
3     server_name www.asd.com;    域名
4
5     #charset koi8-r;
6     #access_log /var/log/nginx/log/host.access.log  main;
7
8     location / {
9         root    /www;  网站页面的位置
10        index   index.php index.html index.htm;
11    }
12        加一个支持php的
13    #error_page  404            /404.html;
14
15    # redirect server error pages to the static page /50x.html
16
17
18
19
20    location ~ /\.php$ {
21        root    /www;
22        fastcgi_pass  127.0.0.1:9000;
23        fastcgi_index  index.php;
24        fastcgi_param  SCRIPT_FILENAME  /www/$fastcgi_script_name;
25        include        fastcgi_params;
26    }
27
28 -- 插入 --

```

启动 nginx

b. vim /etc/php-fpm.d/www.conf

```

37 ;       will be used.
38 ; RPM: apache Choosed to be able to access some dir as httpd
39 user = nginx
40 ; RPM: Keep a group allowed to write in log dir.
41 group = nginx
42
43 ; Choose how the process manager will control the number of child processes.
44 ; Possible Values:
45 ;   static - a fixed number (pm.max_children) of child processes;
"/etc/php-fpm.d/www.conf" 226L, 10016C

```

4. 启动 php 和数据库

```

[root@lym ~]#
[root@lym ~]# service php-fpm start
正在启动 php-fpm: [确定]
[root@lym ~]# service mysql start
mysql: 未被识别的服务
[root@lym ~]# service mysqld start
初始化 MySQL 数据库: WARNING: The host 'lym' could not be looked up with resolveip.
This probably means that your libc libraries are not 100 % compatible
with this binary MySQL version. The MySQL daemon, mysqld, should work
normally with the exception that host name resolving will not work.
This means that you should use IP addresses instead of hostnames
when specifying MySQL privileges !
Installing MySQL system tables...
OK
Filling help tables...
OK

```

5. 授权，使登录数据库时使用 ‘123456’ 密码

```

[root@lym ~]# mysql
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 2
Server version: 5.1.73 Source distribution

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> grant all privileges on *.* to root@localhost identified by '123456';
Query OK, 0 rows affected (0.01 sec)
                                     授权，使nginx能读取数据库内容

mysql>
mysql> flush privileges;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the
e near 'privileges' at line 1
mysql> flush privileges;
Query OK, 0 rows affected (0.00 sec)
                                     刷新一下

```

## 6. 测试网站和 php 的连通性

```

1 <?php
2 phpinfo();
3 ?>

```

"/www/index.php" 3L, 20C

以上搭建了一个 lnmpp 环境.

## 7. 安装 redis

```

libgcc-devel-4.4.7-17.el6.x86_64.rpm      php-bcmath-5.3.3-47.el6.x86_64.rpm      zlib-devel-1.2.3-29.el6.x86_64.rpm
[root@lym media]# tar -zxf redis-2.8.19.tar.gz -C /usr/src/
[root@lym media]# cd /usr/src/
[root@lym src]#
[root@lym src]# cd redis-2.8.19/
[root@lym redis-2.8.19]# ls
00-RELEASENOTES  CONTRIBUTING  deps      Makefile  README    runtest    sentinel.conf  tests
BUGS              COPYING      INSTALL   MANIFESTO  redis.conf  runtest-sentinel  src           utils
[root@lym redis-2.8.19]# make
cd src && make all
make[1]: Entering directory `/usr/src/redis-2.8.19/src'
rm -rf redis-server redis-sentinel redis-cli redis-benchmark redis-check-dump redis-check-aof *.o *.gcda *.gcno *
(cd ../deps && make distclean)
make[2]: Entering directory `/usr/src/redis-2.8.19/deps'
(cd hiredis && make clean) > /dev/null || true
(cd hiredis && make) > /dev/null || true

```

```

[root@lym redis-2.8.19]# make PREFIX=/usr/local/redis install
cd src && make install
make[1]: Entering directory `/usr/src/redis-2.8.19/src'

Hint: It's a good idea to run 'make test' ;)

INSTALL install
INSTALL install
INSTALL install
INSTALL install
INSTALL install
make[1]: Leaving directory `/usr/src/redis-2.8.19/src'
[root@lym redis-2.8.19]#
[root@lym redis-2.8.19]#
[root@lym redis-2.8.19]# cp redis.conf /usr/local/redis/
[root@lym redis-2.8.19]#
[root@lym redis-2.8.19]# cd /usr/local/redis/
[root@lym redis]# ls
bin  redis.conf

```

## 8. 安装提供 php 和 redis 联系的软件

### a. 解压

```

gcc-java-4.4.7-17.el6.x86_64.rpm      mysql-5.1.73-7.el6.x86_64.rpm      php-5.3.3-47.el6.x86_64.rpm
gcc-objc-4.4.7-17.el6.x86_64.rpm     mysql-libs-5.1.73-7.el6.x86_64.rpm  phpredis-master.zip
gcc-objc++-4.4.7-17.el6.x86_64.rpm   mysql-server-5.1.73-7.el6.x86_64.rpm
java-1.5.0-gcj-1.5.0-0-29.1.el6.x86_64.rpm  nginx-1.10.1-1.el6ngx.x86_64.rpm
java_cup-0.10k-5.el6.x86_64.rpm      perl-DBD-MySQL-4.013-3.el6.x86_64.rpm
libgcc-4.4.7-17.el6.x86_64.rpm       perl-DBI-1.609-4.el6.x86_64.rpm     redis-2.8.19.tar.gz
libgcj-4.4.7-17.el6.x86_64.rpm       php-5.3.3-47.el6.x86_64.rpm        sinjdoc-0.5-9.1.el6.x86_64.rpm
libgcj-devel-4.4.7-17.el6.x86_64.rpm  php-bcmath-5.3.3-47.el6.x86_64.rpm  zlib-devel-1.2.3-29.el6.x86_64.rpm

[root@lym media]# unzip phpredis-master.zip -d /usr/src/
Archive:  phpredis-master.zip
90ecd1798da817f7b3f02fd430633d3e5d127654
  creating: /usr/src/phpredis-master/
  inflating: /usr/src/phpredis-master/CREDITS
  inflating: /usr/src/phpredis-master/README.markdown
  inflating: /usr/src/phpredis-master/common.h
  inflating: /usr/src/phpredis-master/config.m4

```

### b. 安装

```

[root@lym media]# cd /usr/src/
[root@lym src]# ls
debug_kernels  phpredis-master  redis-2.8.19
[root@lym src]# cd phpredis-master/
[root@lym phpredis-master]# ls
common.h  CREDITS  debian.control  library.c  mkdeb-apache2.sh  README.markdown  redis_session.c  serialize.list
config.m4  debian  igbinary  library.h  php_redis.h  redis.c  redis_session.h  tests
[root@lym phpredis-master]# phpize
Configuring for:
PHP Api Version:      20090626
Zend Module Api No:   20090626
Zend Extension Api No: 220090626
[root@lym phpredis-master]# ./configure --with-php-config=/usr/bin/php-config
checking for grep that handles long lines and -e... /bin/grep
checking for egrep... /bin/grep -E
checking for a sed that does not truncate output... /bin/sed
checking for...

config.status: executing libtool commands
[root@lym phpredis-master]# make && make install
/bin/sh /usr/src/phpredis-master/libtool --mode=compile cc -I. -I/usr/src/phpredis-master -I/usr/src/phpredis-master/main -I/usr/src/phpredis-master -I/usr/include/php -I/usr/include/php/ext -I/usr/include/php/ext/date/lib -DHAVE_CONFIG_H -g -O2 -c /usr/src/phpredis-master/libtool: compile: cc -I. -I/usr/src/phpredis-master -DPHP_ATOM_INC -I/usr/src/phpredis-master -I/usr/include/php -I/usr/include/php/main -I/usr/include/php/TSRM -I/

```

### c. 让 php 支持 redis

```

1650 soap.wsdl_cache_ttl=86400
1651
1652 [sysvshm]
1653 ; A default size of the shared memory segment
1654 ;sysvshm.init_mem = 10000
1655
1656
1657 ; Local Variables:
1658 ; tab-width: 4
1659 ; End:
1660 extension=redis.so 在php主配置文件中添加redis
"/etc/php.ini" 1660L, 69116C

```

```

[root@lym ~]# vim /etc/php.ini
[root@lym ~]# service php-fpm restart
停止 php-fpm: [确定]
正在启动 php-fpm: [确定]
[root@lym ~]#

```

## redis

Redis Support	enabled
Redis Version	2.1.0

## 9. 进入 mysql 插数据

```

mysql> create database mytest;
Query OK, 1 row affected (0.00 sec)

mysql>
mysql> use mytest;
Database changed
mysql> create table test (
  -> id int not null auto_increment,
  -> name char(20) default null,
  -> primary key (id) engine=innodb auto_increment=10 default charset=utf8;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'engine=innodb auto_increment=10 default charset=utf8' at line 4
mysql> create table test ( id int not null auto_increment, name char(20) default null, primary key (id)) engine=innodb auto_increment=10 default charset=utf8;
Query OK, 0 rows affected (0.09 sec)

mysql> describe test;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'describe test' at line 1
mysql> describe test;
+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+
| id    | int(11) | NO   | PRI | NULL    | auto_increment |
| name  | char(20) | YES  |     | NULL    |               |
+-----+-----+
2 rows in set (0.00 sec)

mysql>
mysql> insert into test values (1,'a1'),(2,'a2'),(3,'a3'),(4,'a4'),(5,'a5');
Query OK, 5 rows affected (0.02 sec)
Records: 5 Duplicates: 0 Warnings: 0

mysql> select * from test;
+-----+-----+
| id | name |
+-----+-----+
| 1  | a1   |
| 2  | a2   |
| 3  | a3   |
| 4  | a4   |
| 5  | a5   |
+-----+-----+
5 rows in set (0.00 sec)

mysql>

```

## 10. 开启 redis, 并编写脚本

```

35 # By default Redis does not run as a daemon.
36 # Note that Redis will write a pid file in /var/run/redis.pid when
37 daemonize yes
38

```

```

[root@lym www]# /usr/local/redis/bin/redis-server /usr/local/redis/redis.conf
[root@lym www]# netstat -anpt | grep redis
tcp        0      0 0.0.0.0:6379          0.0.0.0:*            LISTEN     30951/redis-server
tcp        0      0 0.0.0.0:6379          :::*                  LISTEN     30951/redis-server
[root@lym www]#

```

```

1 <?php
2 $redis = new redis();
3 $redis->connect('127.0.0.1',6379) or die ("redis not found");
4 $query = "select * from test limit 4";
5 for ($key=1;$key<=5;$key++)
6 {
7     if (!$redis->get($key))
8     {
9         $connect = mysql_connect('127.0.0.1','root','123456');
10        mysql_select_db(mytest);
11        $result = mysql_query($query);
12        while ($row = mysql_fetch_assoc($result))
13        {
14            $redis->set($row['id'],$row['name']);
15        }
16        $myserver = 'mysql';
17        break;
18    }
19    else
20    {
21        $myserver = "redis";
22        $data[$key] = $redis->get($key);
23    }
24 }
25
26 echo $myserver;
27 echo "<br>";
28 for ($key=1;$key<=5;$key++)
29 {
30     echo "number is <b><font color=FF0000>$key</font></b>";
31     echo "<br>";
32     echo "name is <b><font color=FF0000>$data[$key]</font></b>";
33     echo "<br>";
34 }
35 ?>
36

```

## 11. 验证 php 访问 redis 和 mysql



