LNMP架构

企业实战LNMP高性能服务器

LNMP WEB 架构中，nginx为一款web服务器，本身是不能处理PHP的，当接收到客户端浏览器发送HTTP request请求时，nginx服务器响应并处理web请求，静态资源css、图片、视频、txt等文件静态文件请求，nginx服务器可以直接处理并响应。

但是PHP动态页面请求Nginx不能直接处理，Nginx服务器会将PHP网页脚本通过接口传输协议（网关协议）PHP-FCGI（Fast-CGI）传输给PHP-FPM（进程管理程序）,PHP-FPM不做处理，然后PHP-FPM调用PHP解析器进程，PHP解析器解析PHP脚本信息。

PHP解析器进程可以启动多个，可以实现多进行并 发执行。PHP解释器将解析后的脚本返回到PHP-FPM，PHP-FPM再通过Fast-CGI的形式将脚本信息传送给 Nginx,Nginx服务器再通过Http Response的形式传送给浏览器,浏览器再进行解析与渲染然后进行呈现。

1.安装MySQL

1.1预编译

```
cd /usr/src
```

image-20200131123853554

```
wget http://mirrors.163.com/mysql/Downloads/MySQL-5.5/mysql-5.5.60.tar.gz
```

image-20200131123824911

```
tar xf mysql-5.5.60.tar.gz
```

image-20200131123659415

```
cd mysql-5.5.60/
```

image-20200131121606810

```
yum install gcc ncurses-devel libaio bison gcc-c++ git cmake ncurses-devel
ncurses -y
```

image-20200131123735086

```
cmake . -DCMAKE_INSTALL_PREFIX=/usr/local/mysql55/ \
-DMYSQL_UNIX_ADDR=/tmp/mysql.sock \
-DMYSQL_DATADIR=/data/mysql \
-DSYSCONFDIR=/usr/local/mysql55/ \
-DMYSQL_USER=mysql \ -DMYSQL_TCP_PORT=3306 \
-DWITH_XTRADB_STORAGE_ENGINE=1 \
-DWITH_INNOBASE_STORAGE_ENGINE=1 \
-DWITH_PARTITION_STORAGE_ENGINE=1 \
-DWITH_BLACKHOLE_STORAGE_ENGINE=1 \
```

```
-DWITH_MYISAM_STORAGE_ENGINE=1 \
-DWITH_READLINE=1 \
-DENABLED_LOCAL_INFILE=1 \ -DWITH_EXTRA_CHARSETS=1 \
-DDEFAULT_CHARSET=utf8 \
-DDEFAULT_COLLATION=utf8_general_ci \
-DEXTRA_CHARSETS=all \
-DWITH_BIG_TABLES=1 \
-DWITH_DEBUG=0
```

image-20200131122120926

1.2编译与安装

make && make install

image-20200131121809274

```
cp support-files/my-large.cnf /usr/local/mysql55/my.cnf
cp support-files/mysql.server /etc/init.d/mysqld
chmod +x /etc/init.d/mysqld
mkdir -p /data/mysql
useradd -s /sbin/nologin mysql
chown -R mysql. /data/mysql
/usr/local/mysql55/scripts/mysql_install_db --user=mysql --datadir=/data/mysql -
-basedir=/usr/local/mysql55
/etc/init.d/mysqld start
```

image-20200131124652537

image-20200131124618281

image-20200131125147867

image-20200131125645787

1.3添加系统服务

```
# 加入service服务:
chkconfig --add mysqld
chkconfig --level 35 mysqld on
```

image-20200131134056155

2.安装nginx

2.1预编译

```
cd /usr/src
wget http://nginx.org/download/nginx-1.16.1.tar.gz
tar xf nginx-1.16.1.tar.gz
cd nginx-1.16.1/
./configure --prefix=/usr/local/nginx --with-http_stub_status_module
```

image-20200131144108965

2.2编译与安装

```
make && make install
```


image-20200131200121295

```
修改nginx进程用户为nginx:
[root@localhost]# grep "^user" /usr/local/nginx/conf/nginx.conf
```


image-20200131200854031

2.3启动nginx

```
/usr/local/nginx/sbin/nginx
```


image-20200131200102158

image-20200131200046319

3.安装PHP

3.1安装依赖

```
yum -y install gd curl curl-devel libjpeg libjpeg-devel libpng libpng-
develfreetype freetype-devel libxml2 libxml2-devel
```


image-20200131200945016

3.2预编译

```
# 解压包
tar xf php-5.6.8.tar.bz2
cd php-5.6.8
```


image-20200131201929653

```
./configure --prefix=/usr/local/php \
--enable-fpm \
--enable-debug \
--with-gd \
--with-jpeg-dir \
--with-png-dir \
--with-freetype-dir \
--enable-mbstring \
--with-curl \
--with-mysql=mysqlnd \
--with-mysqli=mysqlnd \
--with-pdo-mysql=mysqlnd \
--with-config-file-path=/usr/local/php/etc \
--with-zlib-dir
```


image-20200131202022622

3.3编译/安装

```
make && make install
```


image-20200131202905260

```
cp php.ini-development /usr/local/php/etc/php.ini
cp /usr/local/php/etc/php-fpm.conf.default /usr/local/php/etc/php-fpm.conf
cp sapi/fpm/init.d.php-fpm /etc/init.d/php-fpm
chmod +x /etc/init.d/php-fpm
```


image-20200131204613579

```
# 修改php-fpm的用户为nginx:
# egrep "^(user|group)" /usr/local/php/etc/php-fpm.conf
user = nginx
group = nginx
# 启动php-fpm:
/etc/init.d/php-fpm start
```


image-20200211190129218

4.同一服务器上word press博客

```
# 解压包到nginx发布目录:
tar xf wordpress-4.9.4-zh_CN.tar.gz -C /usr/local/nginx/html/
chown nginx. -R /usr/local/nginx/html/wordpress/
```


image-20200131210032550

4.1.创建虚拟主机

```
# 指定应用的虚拟主机目录(主配置文件http指令块下添加):
include vhost/*.conf;
```


image-20200131210959725

```
# 创建虚拟主机目录:
mkdir -p /usr/local/nginx/conf/vhost
# 创建虚拟主机目录:
mkdir -p /usr/local/nginx/conf/vhost# 创建虚拟主机配置文件:
vim /usr/local/nginx/conf/vhost/blog.wordpress.com.conf
server {
    listen 80;
    server_name blog.wordpress.com;
charset utf-8;
    access_log logs/wordpress.access.log main;
    location / {
        root html/wordpress;
        index index.php index.html index.htm;
    }
#error_page 404 /404.html;
# redirect server error pages to the static page /50x.html
#
```

```
error_page 500 502 503 504 /50x.html;
    location = /50x.html {
        root html;
    }
    location ~ \.php$ {
        root html/wordpress;
        fastcgi_pass 127.0.0.1:9000;
        fastcgi_index index.php;
        fastcgi_param SCRIPT_FILENAME $document_root$fastcgi_script_name;
        include fastcgi_params;
    }
}
```

image-20200131211400615

image-20200131211311301

4.2.创建数据库

```
# 启动数据库服务:
/etc/init.d/mysqld start
# 进入数据库创建数据库,并授权:
mysql> create database wordpress charset utf8;
Query OK, 1 row affected (0.00 sec)
mysql> grant all on wordpress.* to "wordpress"@localhost identified by "123456";
Query OK, 0 rows affected (0.10 sec)
mysql> flush privileges;
Query OK, 0 rows affected (0.00 sec)
```

image-20200201131342778

4.3.设置wordpress

image-20200201132011134

image-20200201132212845

出现此图要到wordpress目录下创建wp-config.php文件。

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image-20200203165236396

image-20200203165302529

image-20200203180217150

5.同一服务器上创建论坛2

切换到vhost目录:

```
cp blog.wordpress.com.conf bbs.discuz.com.conf
```

image-20200203184438613

修改域名和路径:

```
server {
```

```
    listen 80;
    server_name bbs.discuz.com;
    charset utf-8;
access_log logs/discuz.access.log main;
    location / {
        root html/discuz/upload;
        index index.php index.html index.htm;
    }
#error_page 404 /404.html;
#redirect server error pages to the static page /50x.html
#
error_page 500 502 503 504 /50x.html;
    location = /50x.html {
        root html;
    }
    location ~ \.php$ {
        root html/discuz/upload;
        fastcgi_pass 127.0.0.1:9000;
        fastcgi_index index.php;
        fastcgi_param SCRIPT_FILENAME $document_root$fastcgi_script_name;
        include fastcgi_params;
    }
}
```

image-20200203185741149

5.1上传代码和解压

```
# 解压：
unzip Discuz_X3.1_SC_UTF8.zip -d /usr/local/nginx/html/discuz/
# 授权：
chown nginx. -R /usr/local/nginx/html/discuz/
```

image-20200203192227695

我同意

image-20200203192841471

授权

image-20200203193056249

下一步

image-20200203193220570

5.2数据库设置

```
mysql> create database discuz charset utf8;
Query OK, 1 row affected (0.00 sec)
mysql> grant all on discuz.* to "discuz"@localhost identified by "123456";
Query OK, 0 rows affected (0.00 sec)
mysql> flush privileges;
Query OK, 0 rows affected (0.01 sec)
```

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image-20200203193838027