LAMP架构实战

# 1.1 单实例MYSQL的安装

## 1.1.1 MYSQL数据库安装准备

1)提前加大虚拟机内存，编译时候会更快 1-2G

2)提前下载好软件

3)重视操作过程的报错输出

4)进入虚拟机界面去make;make install以免前功尽弃。

## 1.1.2 MYSQL的单实例安装过程

1)创建MYSQL用户及用户组

useradd -s /sbin/nologin -M mysql

id mysql

2)建立MYSQL软件目录

mkdir -p /home/oldboy/tools

3)下载并安装MYSQL软件

cd /home/oldboy/tools/

rz -y(上传MYSQL数据库源码安装包mysql-5.1.72.tar.gz到该目录下)

tar xf mysql-5.1.72.tar.gz

cd mysql-5.1.72

./configure \

--prefix=/application/mysql5.1.72 \

--with-unix-socket-path=/application/mysql5.1.72/tmp/mysql.sock \

--localstatedir=/application/mysql5.1.72/data \

--enable-assembler \

--enable-thread-safe-client \

--with-mysqld-user=mysql \

--with-big-tables \

--without-debug \

--with-pthread \

--enable-assembler \

--with-extra-charsets=complex \

--with-readline \

--with-ssl \

--with-embedded-server \

--enable-local-infile \

--with-plugins=partition,innobase \

--with-mysqld-ldflags=-all-static \

--with-client-ldflags=-all-static

make && make install

ln -s /application/mysql5.1.72/ /application/mysql

ll /application/mysql/

4)初始化数据库

cd /home/oldboy/tools/mysql-5.1.27/support-files

ll /home/oldboy/tools/mysql-5.1.27/support-files

cp my-small.cnf /etc/my.cnf

less /etc/my.cnf

mkdir /application/mysql/data -p

chown -R mysql.mysql /application/mysql/

/application/mysql/bin/mysql\_install\_db --basedir=/application/mysql --datadir=/application/mysql/data/ --user=mysql

ll /application/mysql/data

5)启动数据库

cd /home/oldboy/tools/mysql-5.1.27/support-files

cp mysql.server.sh /etc/init.d/mysqld

chmod +x /etc/init.d/mysqld

echo "/etc/init.d/mysqld >/dev/null 2>&1" >>/etc/rc.local

/application/mysql/bin/mysqld\_safe &

6)添加mysql的系统环境变量

echo 'PATH="/application/mysql/bin/:$PATH"' >>/etc/profile

grep mysql /etc/profile

source /etc/profile

mysql

mysql> SHOW DATABASES;

mysql>

7)为MYSQL数据库添加系统管理员密码

/application/mysql/bin/mysqladmin -u root password 'oldboy123'

mysql -uroot -poldboy123

mysql> show version();

mysql> show user();

8)mysql数据库简单优化

mysql> drop database test;

mysql> select host,user from mysql.user;

mysql> drop user ""@httpd;

mysql> drop user ""@localhost;

mysql> drop user "root"@httpd;

mysql> select user,host from mysql.user

+--------+-------------+

| user |host |

+--------+-------------+

|root | 127.0.0.1 |

|root | localhost |

+--------+-------------+

# 1.1.3 安装常见故障

故障1：当执行./configure编译MYSQL时，出现以下错误现象

checking for termcap functions library... configure: error: No curses/termcap library found

解决办法: yum install ncurses ncurses-devel -y

#说明

#可以通过./configure -help命令拉查看以上各个参数的用途

以上配置中的"\"斜线参数表示换行

#configure编译常用参数的说明，请见附录一

#当执行make命令时，也可以执行下面命令make -j 4加快mysql的编译 #-j 表示希望使用

CPU核数

#如果使用不当可能反而安装速度更慢

#注意编译的结果是否报错(带error字符样),有些不少读者也不管有没有报错，就直接make install 导致无法顺利完成安装

故障2：当执行初始化数据库命令时，出现以下故障现象

WARNING: The host 'mysql' could not be looked up with resolveip.

......

解决办法：

grep `uname -n /etc/hosts`

如果解析域名的结果没有出现mysql,要添加mysql域名解析记录，比如

127.0.0.1 mysql localhost.localdomain localhost

故障3：当执行初始化数据库命令时，出现以下故障现象

ERROR:1004 Can't create file '/tmp/#sql1300e\_1\_0.frm'(error:13)

........

解决办法：

ls -ld /tmp

chmod -R 1777 /tmp/

故障4：当执行/etc/init.d/mysqld start时，出现如下故障现象

/etc/init.d/mysqld: line 260: my\_print\_defaults: command not found

/etc/init.d/mysqld: line 263: my\_print\_defaults: command not found

/etc/init.d/mysqld: line 270: @HOSTNAME@: command not found

/etc/init.d/mysqld: line 279: @HOSTNAME@: command not found

/etc/init.d/mysqld: line 293: cd : @prefix@: 没有那个文件或目录

Starting MySQL ERROR! Couldn't find MySQL manager(@bindir@/mysqldmanager) or server(bindir@/mysqld\_safe)

故障解决办法一：

vim /etc/init.d/mysqld

修改如下配置内容为

basedir=/application/mysql/

datadir=/application/mysql/data PATH=/sbin:/usr/sbin:/bin:/usr/bin:$basedir/bin:/application/mysql/bin

保存退出

mysqladmin shutdown

/etc/init.d/mysqld start

故障解决方法二：使用/application/mysql/bin/mysqld\_safe &命令启动MYSQL

故障5：当执行/etc/init.d/mysqld start的时候，出现如下故障详细

ERROR! MySQL manager or server PID file could not be found

解决办法：

rm -rf /applicaiton/mysql/data

/application/mysql/bin/mysql\_install\_db --basedir=/application/mysql --datadir=/application/mysql/data/ --user=mysql

故障6 当运行./configure后出现如下故障现象

/bin/rm: cannot remove `libtoolT': No such file or directory

解决办法：

这时直接打开 configure,把 $RM “$cfgfile” 那行删除掉，重新再运行 ./configure 就可以了.找到 vi configure 大概在文件的最后部分找到如下： 注释掉 $RM "$cfgfile",或者直接删除也可以,然后重新运行./configure即可。

cfgfile="${ofile}T"

trap "$RM \"$cfgfile\"; exit 1" 1 2 15

$RM "$cfgfile"

cat <<\_LT\_EOF >> "$cfgfile"

#! $SHELL

提示：不要先使用MYSQL安全启动命令启动，然后在用/etc/init.d/mysqld启动，

两个命令频繁切换使用，会出现问题

小技巧：将系统的命令历史记录去掉行号放入到b.log里

sed -e 's@^.\*[0-9]^$@@g' a.log

sed -i 's@^.\*[0-9]^$@@g' a.log >b.log

# 1.1.4 系统管理员密码丢失的处理

killall mysqld

killall mysqld -9

/application/mysql/bin/mysqld\_safe --skip-grant-table &

mysql

mysql> update mysql.user set password=PASSWORD("oldboy123") where host='localhost' and user='root'

mysql> flush privileges;

mysql> quit

killall mysqld -9

killall mysqld -9

/etc/init.d/mysqld start

mysql -uroot -poldboy123

mysql>

# 2.1 PHP的安装

1)检查apache和mysql应用程序是否正常运行

lsof -i:3306

lsof -i:80

2)检查PHP安装依赖的软件包，如果没有安装，就安装依赖包

rpm -aq zlib libxml libjpeg freetype libpng gd curl libiconv zlib-devel libxml2-devel libjpeg-devel freetype-devel libpng-devel gd-devel curl-devel

yum install zlib libxml libjpeg freetype libpng gd curl libiconv zlib-devel libxml2-devel libjpeg-devel freetype-devel libpng-devel gd-devel curl-devel -y

cd /home/oldboy/tools

wget http://ftp.gnu.org/pub/gnu/libiconv/libiconv-1.14.tar.gz

tar zxf libiconv-1.14.tar.gz

cd libiconv-1.14

./configure --prefix=/usr/local/libiconv

make

make install

cd ../

yum install -y openssl-devel libxslt-devel

3)安装PHP过程步骤

cd /home/oldboy/tools

rz -y (上传php-5.3.27.tar.gz软件包到该目录下)

tar xf php-5.3.27.tar.gz

cd php-5.3.27

./configure \

--prefix=/application/php5.3.27 \

--with-apxs2=/application/apache/bin/apxs \ #给apache添加模块的

--with-mysql=/application/mysql \

--with-xmlrpc \

--with-openssl \

--with-zlib \

--with-freetype-dir \

--with-gd \

--with-jpeg-dir \

--with-png-dir \

--with-iconv=/usr/local/libiconv \

--enable-short-tags \

--enable-sockets \

--enable-zend-multibyte \

--enable-soap \

--enable-mbstring \

--enable-static \

--enable-gd-native-ttf \

--with-curl \

--with-xsl \

--enable-ftp \

--with-libxml-dir

make

make install

ln -s /application/php5.3.27/ /application/php

ll /application/php/

## 2.1.1 PHP部分安装参数详解

--prefix=/application/php5.3.27 #表示指定PHP的安装路径为/application/php5.3.27

--with-apxs2=/applcation/apache/bin/apxs #这个需要指定apache的bin/apxs路径，通过apxs来增加PHP扩展模块到apache

--with-mysql=/application/mysql 这个需要指定mysql的安装路径

如果想了解更多需要./configure --help命令来详细查看以上各个参数的用途

ll /application/apache/modules/

grep libphp5 /application/apache/conf/httpd.conf

# 2.2 配置PHP

cd /home/oldboy/tools/php-5.3.27

cp php.ini-production /application/php/lib/php.ini

小结：正式配置文件一般关闭显示LOG,不输出LOG;

# 2.3 配置apache支持PHP

1)执行如下命令编辑apache的主配置文件http.conf:

cd /application/apache/conf

cp http.conf httpd.conf.ori

vim /application/apache/conf/httpd.conf +98

增加如下内容

ServerName 127.0.0.1:80

转到311行增加如下两行对PHP的解析支持内容：

AddType application/x-httpd-php .php .phtml

AddType application/x-httpd-php-source .phps

转到65行修改如下内容为

User www

Group www

转到116行修改如下内容为

<IfModule dir\_module>

DirectoryIndex index.php index.html

</IfModule>

保存配置后退出

或者使用快速配置方法：

sed -i '99a ServerName 127.0.0.1:80' /application/apache/conf/httpd.conf

sed -i '311a AddType application/x-httpd-php .php .phtml\n AddType application/x-httpd-php-source .phps' /application/apache/conf/httpd.conf

sed -i 's#User .\*#User www#' /application/apache/conf/httpd.conf

sed -i 's#Group .\*#Group www#' /application/apache/conf/httpd.conf

sed -i 's#DirectoryIndex .\*#DirectoryIndex index.php index.html#' /application/apache/conf/httpd.conf

创建www用户和组

useradd -s /sbin/nologin -M www

id www

/application/apache/bin/apachectl -t

/application/apache/bin/apachectl graceful

lsof -i :80

cd /application/apache/conf/extra/

vim httpd-vhosts.conf

NameVirtualHost \*:80

<VirtualHost \*:80>

ServerAdmin 286937899@qq.com

DocumentRoot "/var/html/www"

ServerName www.etiantian.org

ServerAlias etiantian.org

ErrorLog "logs/www\_error\_log"

CustomLog "logs/www\_access\_log" common

</VirtualHost>

<VirtualHost \*:80>

ServerAdmin 286937899@qq.com

DocumentRoot "/var/html/blog"

ServerName blog.etiantian.org

ErrorLog "logs/blog\_error\_log"

CustomLog "logs/blog\_access\_log" common

</VirtualHost>

<VirtualHost \*:80>

ServerAdmin 286937899@qq.com

DocumentRoot "/var/html/bbs"

ServerName bbs.etiantian.org

ErrorLog "logs/bbs\_error\_log"

CustomLog "logs/bbs\_access\_log" common

cd /var/www/blog/

vim index.php

<?php

phpinfo();

?>

chown -R www.www /var/html/blog/

/application/apache/bin/apachectl restart

测试PHP与MYSQL数据的连接

vim index.php

<?php

$link\_id=mysql\_connect('localhost','root','oldboy123') or mysql\_error();

if($link\_id){

echo "mysql successful by oldboyy !\n";

}else{

echo "mysql\_error()";

}

?>

# 2.4 安装常见故障

当执行./configure......出现以下故障现象

configure: error:Cannot find OpenSSL's<evp.h>

解决方法：

yum install -y openssl-devel

故障2：当执行./configure......出现以下故障现象

configure: error:xslt-config not found.Please reinstall the libxslt>==1.1.0

distribution

解决办法

yum install libxslt-devel -y

# 2.5 部署Discuz

mysql -uroot -poldboy123

mysql> show databases;

mysql> create database discuz

mysql> GRANT ALL PRIVILEGES ON \*.\* TO 'mysql'@'192.168.100.%' IDENTIFIED BY '123456';

mysql > FLUSH PRIVILEGES;

cp -pvr upload/\* /var/html/bbs/

chmod -R 777 /var/html/bbs

# 2.6 Discuz网站简单安全优化

安全优化需求：

1：站点内所有目录和文件的用户和组都应该是root

2: 站点内所有目录权限默认是755，不能创建或复制文件到该目录

3：站点内所有文件权限是默认是644，不能修改站点目录内的文件

在客户端浏览器中输入http://bbs.wpaccp.com/install/install.php后安装提示安装即可(表前缀：wp)

安全优化步骤和过程：

chmod -R 644 /var/html/bbs/\*.php

chmod 755 /var/html/bbs/archiver

chmod 755 /var/html/bbs/api

chmod 755 /var/html/bbs/config

chmod 755 /var/html/bbs/data

chmod 755 /var/html/bbs/install

chmod 755 /var/html/bbs/source

chmod 755 /var/html/bbs/static

chmod 755 /var/html/bbs/template

chmod 755 /var/html/bbs/uc\_client

chmod 755 /var/html/bbs/uc\_server

mysql -uroot -poldboy123

mysql> drop user mysql@'192.168.100.%';

mysql> GRANT insert,select,update,delete ON discuz.\* TO 'mysql'@'192.168.100.%' IDENTIFIED BY '123456';

# 2.7 部署wiki

apache常用工作模式有两种，区别

worker模式

1:线程模式

2:占用资源少

3:稳定性略差

4:并发大

prefork模式

1:进程模式

2:占用资源多

3:稳定

4:并发一般

# 2.8 一键安装LAMP脚本

|  |
| --- |
| #!/bin/bash  #  #主机名IP:192.168.100.192  setup=/home/wpaccp/tools  uninstall\_soft() {  rpm -ap grep $1 >/dev/null 2>&1  if [ $? -eq 0 ]; then  for $soft in $(rpm -ap $1); do  rpm -e --nodeps $soft  done  fi  [ -e /etc/httpd/conf/httpd.conf ] && rm -rf /etc/httpd/conf/httpd.conf  }  install install\_apache() {  /sbin/iptables -F  [ `grep "SELINUX=En" /etc/selinux/config|wc -l` -eq 0 ] || sed -i 's@SELINUX= .\*@SELINUX=disable@' /etc/selinux/config  setenforce 0 >/dev/null 2>&1  rpm -aq zlib zlib-devel >/dev/null 2>&1  [ $? -eq 0 ] || yum install -y zlib zlib-devel  cd $setup  [ ! -e $setup/httpd-2.2.27.tar.gz ] && wget http://archive.apache.org/dist/httpd/httpd-2.2.27.tar.gz  tar xf httpd-2.2.27.tar.gz  cd httpd-2.2.27  ./configure \  --prefix=/application/apache2.2.27 \  --enable-deflate \  --enable-expires \  --enable-headers \  --enable-modules=most \  --enable-so \  --with-mpm-worker \  --enable-rewrite  make && make install  ln -s /application/apache2.2.27/ /application/apache  cd /application/apache/  /application/apache/bin/apachectl -t >/dev/null 2>&1  [ $? -eq 0 ] && /application/apache/bin/apachectl start >/dev/null 2>&1  mkdir /var/html/{www,bbs,blog} -p  touch /var/html/{www,blog,bbs}/index.html  for name in www blog bbs do;  echo "http://$name.etiantian.org/" >/var/html/$name/index.html;  done  cd conf/extra/  [ -e conf/httpd-vhosts.conf.ori ] || cp httpd-vhosts.conf httpd-vhosts.conf.ori  [ -s conf/httpd-vhosts.conf ] && >conf/httpd-vhosts.conf  cat >httpd-vhosts.conf<< EOF  NameVirtualHost \*:80  <VirtualHost \*:80>  ServerAdmin 286937899@qq.com  DocumentRoot "/var/html/www"  ServerName www.etiantian.org  ServerAlias etiantian.org  ErrorLog "logs/www\_error\_log"  CustomLog "logs/www\_access\_log" common  </VirtualHost>  <VirtualHost \*:80>  ServerAdmin 286937899@qq.com  DocumentRoot "/var/html/blog"  ServerName blog.etiantian.org  ErrorLog "logs/blog\_error\_log"  CustomLog "logs/blog\_access\_log" common  </VirtualHost>  <VirtualHost \*:80>  ServerAdmin 286937899@qq.com  DocumentRoot "/var/html/bbs"  ServerName bbs.etiantian.org  ErrorLog "logs/bbs\_error\_log"  CustomLog "logs/bbs\_access\_log" common  </VirtualHost>  EOF  cd ..  [ -e httpd.conf.ori ] || cp httpd.conf httpd.conf.ori  [ `grep "#Include conf/extra/httpd-vhosts.conf" /application/apache/conf/httpd.conf|wc -l` -eq 0 ] || sed -i '@#Include conf/extra/httpd-vhosts.conf@Include conf/extra/httpd-vhosts.conf@' httpd.conf  [ `grep "#include conf/extra/httpd-mpm.conf" /application/apache/conf/httpd.conf|wc -l` -eq 0 ] || sed -i '@#Include conf/extra/httpd-mpm.conf@Include conf/extra/httpd-mpm.conf@' httpd.conf  ../../bin/apachectl -t  ../../bin/apachectl graceful  }  install\_mysql() {  id mysql >/dev/null 2>&1  [ $? -eq 0 ] || useradd -s /sbin/nologin -g mysql -M mysql  [ -d $setup ] || mkdir $setup -p  cd $setup  ping -c 1 114.114.114.114 >/dev/null 2>&1  if [ $? -eq 0 -a ! -e $setup/mysql-5.1.72.tar.gz ]; then  wget http://mirrors.sohu.com/mysql/MySQL-5.1/mysql-5.1.72.tar.gz  fi  tar xf mysql-5.1.72.tar.gz  cd mysql-5.1.72  ./configure \  --prefix=/application/mysql5.1.72 \  --with-unix-socket-path=/application/mysql5.1.72/tmp/mysql.sock \  --localstatedir=/application/mysql5.1.72/data \  --enable-assembler \  --enable-thread-safe-client \  --with-mysqld-user=mysql \  --with-big-tables \  --without-debug \  --with-pthread \  --enable-assembler \  --with-extra-charsets=complex \  --with-readline \  --with-ssl \  --with-embedded-server \  --enable-local-infile \  --with-plugins=partition,innobase \  --with-mysqld-ldflags=-all-static \  --with-client-ldflags=-all-static  make && make install  ln -s /application/mysql5.1.72/ /application/mysql  [ -e /etc/my.cnf ] && rm -rf /etc/my.cnf  cp support-files/my-small.cnf /etc/my.cnf  [ -e /etc/init.d/mysqld ] && rm -rf /etc/init.d/mysqld  cp support-files/mysql.server.sh /etc/init.d/mysqld  [ -x /etc/init.d/mysqld ] || chmod +x /etc/init.d/mysqld  [ `grep "basedir=/application/mysql" /etc/init.d/mysqld|wc -cl` -eq 0 ] && sed -i 's#basedir= .\*#basedir=/application/mysql#' /etc/init.d/mysqld  [ `grep "datadir=/application/mysql/data" /etc/init.d/mysqld|wc -l` -eq 0 ] && sed -i 's@datadir= .\*@datadir=/application/mysql/data@' /etc/init.d/mysqld  [ ! -d /application/mysql/data ] || mkdir /application/mysql/data -p  chown -R mysql.mysql /application/mysql/  /application/mysql/bin/mysql\_install\_db --basedir=/application/mysql --datadir=/application/mysql/data/ --user=mysql  if [ $? -eq 0 ]; then  if [ grep `"/etc/init.d/mysqld" /etc/rc.local | wc -l` -eq 0 ]; then  echo "/etc/init.d/mysqld >/dev/null 2>&1" >>/etc/rc.local  fi  fi  /etc/init.d/mysqld >/dev/null 2>&1  if [ `grep "/application/mysql/bin" /etc/profile|wc -l` -eq 0 ]; then  echo 'PATH="/application/mysql/bin/:$PATH"' >>/etc/profile  source /etc/profile  fi  mysql  }  install\_php() {  for soft in zlib libxml libjpeg freetype libpng gd curl libiconv zlib-devel libxml2-devel libjpeg-devel freetype-devel libpng-devel gd-devel curl-devel openssl-devel libxslt-devel; do  rpm -aq $soft >/dev/null 2>&1  [ $? -eq 0 ] && continue || yum install -y $soft  done  cd $setup  [ ! -e $setup/libiconv-1.14.tar.gz ] && wget http://ftp.gnu.org/pub/gnu/libiconv/libiconv-1.14.tar.gz  tar xf libiconv-1.14.tar.gz >/dev/null 2>&1  cd libiconv-1.14  ./configure --prefix=/usr/local/libiconv >/dev/null 2>&1  make >/dev/null 2>&1 && make install >/dev/null 2>&1  [ ! -e $setup/php-5.3.27.tar.gz ] && cp /LAMP/soft/php-5.3.27.tar.gz $setup/  tar xf php-5.3.27.tar.gz >/dev/null 2>&1  cd php-5.3.27  ./configure \  --prefix=/application/php5.3.27 \  --with-apxs2=/application/apache/bin/apxs \  --with-mysql=/application/mysql \  --with-xmlrpc \  --with-openssl \  --with-zlib \  --with-freetype-dir \  --with-gd \  --with-jpeg-dir \  --with-png-dir \  --with-iconv=/usr/local/libiconv \  --enable-short-tags \  --enable-sockets \  --enable-zend-multibyte \  --enable-soap \  --enable-mbstring \  --enable-static \  --enable-gd-native-ttf \  --with-curl \  --enable-ftp \  --with-libxml-dir >/dev/null 2>&1  make && make install  ln -s /application/php5.3.27/ /application/php  [ ! -e /application/php/lib/php.ini ] && cp php.ini-production /application/php/lib/php.ini  [ -e /application/apache/conf/httpd.conf.ori ] && rm -rf /application/apache/conf/httpd.conf.ori  cd /application/apache/conf  cp httpd.conf httpd.conf.ori  sed -i '99a ServerName 127.0.0.1:80' /application/apache/conf/httpd.conf  sed -i '311a AddType application/x-httpd-php .php .phtml\n AddType application/x-httpd-php-source .phps' /application/apache/conf/httpd.conf  sed -i 's#User .\*#User www#' /application/apache/conf/httpd.conf  sed -i 's#Group .\*#Group www#' /application/apache/conf/httpd.conf  sed -i 's#DirectoryIndex .\*#DirectoryIndex index.php index.html#' /application/apache/conf/httpd.conf  id www >/dev/null 2>&1  [$? -eq 0 ] || useradd -s /sbin/nologin -M www  [ -e /var/html/www/index.html ] && rm -rf /var/html/www/index.html  [ -e /var/html/www/index.php ] || cp /LAMP/files/index.php /var/html/www/  chown -R www.www /var/html/www/  /application/apache/bin/apachectl -t >/dev/null 2>&1  [ $? -eq 0 ] && /application/apache/bin/apachectl restart >/dev/null 2>&1  }  main() {  uninstall\_soft httpd\*  uninstall\_soft mysql\*  install\_mysql  install\_apache  install\_php  }  main |