

MySQL 安装部署

目录

二进制包安装.....	2
利用 yum 安装.....	4
rpm 安装.....	7
源码编译安装 , 编译关键参数介绍(参考).....	9

版本	修订人	日期
创建	吴炳锡	2014-12-14

整体思路:

- ◆ 系统的学习 MySQL 安装(RPM, 二进制包, 源码编译等), 了解 MySQL 安装目录结构及作用

MySQL 安装:

需求场景

到了一个新公司, 一个新项目: 如果电影资料相关的项目, 我们需要准备一个数据库供开发来开发程序。 那么我们就要安装一个 MySQL 数据库。

数据文件及日志存储到/data/mysql/项目/{data,tmp,logs} 下面

mysql 的配置文件存到/etc/my.cnf 下面

二进制包安装

预编译二进制包是针对一些通用环境做的编译包, 在大部分 linux 平台上都能直接安装。

我个人比较习惯是用这种方式安装, 因此重点介绍下。

相比 yum 和 rpm 安装, 预编译二进制包安装的优势有:

- 1、更灵活, 可以自定义安装路径, 不像 yum/rpm 那样, 只能安装到固定路径下;
- 2、可以安装最新版本, 不受发行版限制;
- 3、一次安装, 全部搞定, 不像 yum/rpm, 要下载多个安装包, 不过缺点也明显, 就是安装包太大了, 哈哈。

二进制安装文件存放:

把数据库程序文件安装在/opt/app/mysql 下面 或是 (/opt/mysql/mysql-xxx)

下面是安装过程:

1. 通过 mysql 官网或者国内/亚洲镜像网站;

<http://dev.mysql.com/downloads/mysql/>

MySQL Community Server 5.6.22

Select Platform:
Linux - Generic

(MySQL-shared-compat-5.6.22-1.linux_glibc2.5.x86_64.rpm) MD5: 9e13b6b3d13035b07a3e536a13bb1251

Linux - Generic (glibc 2.5) (x86, 64-bit), Compressed TAR Archive	5.6.22	297.2M	Download
---	--------	--------	--------------------------

[Login »
using my Oracle Web account](#)
[Sign Up »
for an Oracle Web account](#)

MySQL.com is using Oracle SSO for authentication. If you already have an Oracle Web account, click
Otherwise, you can signup for a free account by clicking the Sign Up link and following the instructions.

[No thanks, just start my download.](#)

右建获取连接:

http://dev.mysql.com/get/Downloads/MySQL-5.6/mysql-5.6.22-linux-glibc2.5-x86_64.tar.gz

或是通过 sohu mirror 去下载:

http://mirrors.sohu.com/mysql/MySQL-5.6/mysql-5.6.22-linux-glibc2.5-x86_64.tar.gz

2. 下载 mysql 预编译二进制安装包 mysql-5.6.22-linux-glibc2.5-x86_64.tar.gz (这不是废话嘛);
3. 解压缩安装包

```
[root@daosen]# cd /opt/software
```

```
root@daosen]# cd /opt/mysql
```

```
[root@daosen]# tar zxf /opt/software/mysql-5.6.22-linux-glibc2.5-x86_64.tar.gz
```

```
[root@daosen]# cd /usr/local/
```

```
root@daosen]# ln -s /opt/mysql/mysql-5.6.22-linux-glibc2.5-x86_64 mysql
```

4. 新建 mysql 用户, 用户组, 顺便制定 datadir

```
[root@daosen]# groupadd mysql
```

<http://wubx.net>

```
[root@daosen ]# useradd mysql -g mysql -d /data/mysql/mytest_3306 -s /dev/null
```

```
#新建的 mysql 用户, 属于 mysql 组, homedir 是 /data/mysql/mytest_3306,
```

5. 创建配置文件

```
/etc/my.cnf
```

内容依赖于课程中给的 my.cnf

6. 初始化 datadir

```
#修改属主
```

```
[root@daosen ]# chown -R mysql:mysql /data/mysql/mytest_3306
```

```
#初始化系统数据文件
```

```
[root@daosen ]# cd /usr/local/mysql
```

```
root@daosen ]# chown -R mysql:mysql *
```

```
[root@daosen ]# ./script/install_mysql_db --user=mysql --datadir=/data/mysql/test_3306
```

7. 添加环境变量

```
echo "PATH=$PATH:/usr/local/mysql/bin">>/etc/profile
```

```
source /etc/profile
```

8. 启动

```
#cp /usr/local/mysql/support-files/mysql.server /etc/init.d/mysqld
#/etc/init.d/mysqld start
```

利用 yum 安装

yum 源准备:

官网 yum 源地址: <http://dev.mysql.com/downloads/repo/yum/>

在上面的找自己对应的版本.如果这里是 CentOS 6.X 可以选择:

Red Hat Enterprise Linux 7 / Oracle Linux 7 (Architecture Independent), RPM Package (mysql-community-release-el7-5.noarch.rpm)	6.0K	Download
Red Hat Enterprise Linux 6 / Oracle Linux 6 (Architecture Independent), RPM Package (mysql-community-release-el6-5.noarch.rpm)	6.0K	Download
Red Hat Enterprise Linux 5 / Oracle Linux 5 (Architecture Independent), RPM Package (mysql-community-release-el5-5.noarch.rpm)	5.4K	Download
Fedora 20 (Architecture Independent), RPM Package (mysql-community-release-fc20-5.noarch.rpm)	5.8K	Download
Fedora 19 (Architecture Independent), RPM Package (mysql-community-release-fc19-5.noarch.rpm)	5.7K	Download
Fedora 18 (Architecture Independent), RPM Package (mysql-community-release-fc18-5.noarch.rpm)	5.7K	Download

点击 Download 后:

如果有帐号了可以登录,如果没有帐号也不想注册了可以用:

Begin Your Download - mysql-community-release-el6-5.noarch.rpm

Login Now or Sign Up for a free account.
An Oracle Web Account provides you with the following advantages:

- Fast access to MySQL software downloads
- Download technical White Papers and Presentations
- Post messages in the MySQL Discussion Forums
- Report and track bugs in the MySQL bug system
- Comment in the MySQL Documentation

[Login »
using my Oracle Web account](#)
[Sign Up »
for an Oracle Web account](#)

MySQL.com is using Oracle SSO for authentication. If you already have an Oracle Web account, click the Login link. Otherwise, you can sign up for a free account by clicking the Sign Up link and following the instructions.

[No thanks, just start my download.](#)

得到具体的网址为: <http://dev.mysql.com/get/mysql-community-release-el6-5.noarch.rpm>

rpm -ihv http://dev.mysql.com/get/mysql-community-release-el6-5.noarch.rpm

```
Retrieving http://dev.mysql.com/get/mysql-community-release-el6-5.noarch.rpm
Preparing... ##### [100%]
1:mysql-community-release##### [100%]
```

查看可用的安装 yum 源:

#yum repolist all | grep mysql

mysql-connectors-community	MySQL Connectors Community	enabled:	12
mysql-connectors-community-source	MySQL Connectors Community - S	disabled	
mysql-tools-community	MySQL Tools Community	enabled:	18
mysql-tools-community-source	MySQL Tools Community - Source	disabled	
mysql55-community	MySQL 5.5 Community Server	disabled	

<http://wubx.net>

mysql55-community-source	MySQL 5.5 Community Server - S disabled
mysql56-community	MySQL 5.6 Community Server enabled: 112
mysql56-community-source	MySQL 5.6 Community Server - S disabled
mysql57-community-dmr	MySQL 5.7 Community Server Dev disabled
mysql57-community-dmr-source	MySQL 5.7 Community Server Dev disabled

保证是 mysql 5.6 Community Server 这个源是 enabled 的. 如果是别的 enabled 有可能安装别的版本的 mysql.

确认:

```
[root@node20 ~]# yum info mysql-community-server
Loaded plugins: security
Available Packages
Name       : mysql-community-server
Arch       : x86_64
Version    : 5.6.22
Release    : 2.el6
Size       : 53 M
Repo       : mysql56-community
Summary    : A very fast and reliable SQL database server
URL        : http://www.mysql.com/
License    : Copyright (c) 2000, 2014, Oracle and/or its affiliates. All rights reserved. Under GPLv2 license as shown in the
           : Description field.
Description: The MySQL(TM) software delivers a very fast, multi-threaded, multi-user,
           : and robust SQL (Structured Query Language) database server. MySQL Server
           : is intended for mission-critical, heavy-load production systems as well
           : as for embedding into mass-deployed software. MySQL is a trademark of
           : Oracle and/or its affiliates
           :
           : The MySQL software has Dual Licensing, which means you can use the MySQL
           : software free of charge under the GNU General Public License
           : (http://www.gnu.org/licenses/). You can also purchase commercial MySQL
           : licenses from Oracle and/or its affiliates if you do not wish to be bound by the terms of
           : the GPL. See the chapter "Licensing and Support" in the manual for
           : further info.
           :
           : The MySQL web site (http://www.mysql.com/) provides the latest news and
           : information about the MySQL software. Also please see the documentation
           : and the manual for more information.
           :
           : This package includes the MySQL server binary as well as related utilities
           : to run and administer a MySQL server.
```

查看是否已安装

```
[root@daosen ]# yum list installed mysql*
```

```
[root@daosen ]# rpm -qa | grep -i mysql
```

如果看到有 mysql-server 的包, 需要先卸载掉

查看是否有该安装包

```
[root@daosen ]# yum list mysql*
```

开始安装

安装 mysql 客户端、服务器端、程序库头文件、共享包等

<http://wubx.net>

利用 yum search mysql 查看可以安装的包

```
[root@daosen ]# yum install mysql-community-server
```

这个过程非常的慢长~~~

安装过程中,如果发生和旧的安装包发生冲突,可以先卸载掉,或者是用 --skip-broken 选项忽略依赖关系继续安装。

初始化库:

```
mysql_install_db --defaults-file=/etc/my.cnf --user=mysql
```

启动数据库:

```
/etc/init.d/mysqld start
```

```
Starting mysqld: [ OK ]
```

通常地,推荐采用 yum 来装,yum 是目前 Fedora、RedHat、SUSE、CentOS 上最流行的软件包管理系统,应用非常广泛,它基于 RPM 包管理,能够从指定的服务器自动下载 RPM 包并且安装,可以自动处理依赖性关系,并且一次安装所有依赖的软件包,无须繁琐地一次次下载、安装。

rpm 安装

```
#cd ~\
```

```
# wget http://mirrors.sohu.com/mysql/MySQL-5.6/MySQL-5.6.22-1.el6.x86_64.rpm-  
bundle.tar 或是用官网下载
```

```
# ls -lh MySQL-5.6.22-1.el6.x86_64.rpm-bundle.tar
```

```
-rw-r--r-- 1 root root 214M Dec 3 23:08 MySQL-5.6.22-1.el6.x86_64.rpm-bundle.tar
```

```
#tar xvf MySQL-5.6.22-1.el6.x86_64.rpm-bundle.tar
```

```
[root@node20 ~]# ls -lh MySQL*.rpm  
-rw-r--r-- 1 7155 wheel 18M Nov 24 12:24 MySQL-client-5.6.22-1.el6.x86_64.rpm  
-rw-r--r-- 1 7155 wheel 3.3M Nov 24 12:24 MySQL-devel-5.6.22-1.el6.x86_64.rpm  
-rw-r--r-- 1 7155 wheel 85M Nov 24 12:24 MySQL-embedded-5.6.22-1.el6.x86_64.rpm  
-rw-r--r-- 1 7155 wheel 54M Nov 24 12:25 MySQL-server-5.6.22-1.el6.x86_64.rpm  
-rw-r--r-- 1 7155 wheel 1.9M Nov 24 12:26 MySQL-shared-5.6.22-1.el6.x86_64.rpm  
-rw-r--r-- 1 7155 wheel 3.8M Nov 24 12:26 MySQL-shared-compat-5.6.22-1.el6.x86_64.rpm  
-rw-r--r-- 1 7155 wheel 49M Nov 24 12:26 MySQL-test-5.6.22-1.el6.x86_64.rpm
```

<http://wubx.net>

其中:MySQL-embedded 是不需要的. MySQL-test 这个只对开发调试有用,生产中不建议安装.

最终需要安装安包如下:

```
ls -lh MySQL*.rpm
```

```
-rw-r--r-- 1 root root 18M Dec 14 17:14 MySQL-client-5.6.22-1.el6.x86_64.rpm
-rw-r--r-- 1 root root 3.3M Dec 14 17:14 MySQL-devel-5.6.22-1.el6.x86_64.rpm
-rw-r--r-- 1 root root 54M Dec 14 17:14 MySQL-server-5.6.22-1.el6.x86_64.rpm
-rw-r--r-- 1 root root 1.9M Dec 14 17:14 MySQL-shared-5.6.22-1.el6.x86_64.rpm
-rw-r--r-- 1 root root 3.8M Dec 14 17:16 MySQL-shared-compat-5.6.22-1.el6.x86_64.rpm
```

安装命令:

可以先用:

```
#rpm -ivh MySQL*.rpm
```

如果失败,可以考虑用新版本替换系统的里的版本.

```
#rpm -Uvh MySQL*.rpm
```

```
[root@node21 ~]# rpm -Uvh MySQL-*.rpm
Preparing... [100%]
 1:MySQL-shared-compat [ 20%]
 2:MySQL-shared [ 40%]
Giving mysqld 5 seconds to exit nicely
 3:MySQL-server [ 60%]
 4:MySQL-devel [ 80%]
 5:MySQL-client [100%]
```

```
rpm -qa |grep MySQL
```

```
MySQL-shared-5.6.22-1.el6.x86_64
```

```
perl-DBD-MySQL-4.013-3.el6.x86_64
```

```
MySQL-shared-compat-5.6.22-1.el6.x86_64
```

```
MySQL-server-5.6.22-1.el6.x86_64
```

```
MySQL-client-5.6.22-1.el6.x86_64
```

```
MySQL-python-1.2.3-0.3.el6.x86_64
```

```
MySQL-devel-5.6.22-1.el6.x86_64
```

查看这个包都安装:

<http://wubx.net>


```
rpm -ql MySQL-server-5.6.22-1.el6.x86_64
```

初始化库:

```
mysql_install_db --defaults-file=/etc/my.cnf --user=mysql
```

启动数据库:

```
/etc/init.d/mysqld start
```

```
Starting mysqld: [ OK ]
```

Rpm 安装其实和 yum 安装类似,只是安装源不太一样而已,yum 采用类似在线的方式安装,而 rpm 采用离线的方式安装,事实上,rpm 也可以支持在线方式安装,例如

```
[root@daosen ]# rpm -ivh http://server.com/ mysql-server-5.1.66-2.el6_3.x86_64.rpm
```

由于和 yum 基本一致,我就不再重复。

源码编译安装,编译关键参数介绍(参考)

源码编译安装非常不推荐,原因有几个:

- 1、准备工作麻烦,一有不顺,就得重新搞;
- 2、编译过程慢,除非有性能较好的机器;
- 3、对一般人而言,没什么特别高的价值(所谓的性能提升,早先的版本稍有提升,但现在很难了);
- 4、除非一些特定场景要做裁减,否则没必要自己编译;

因此,也不会作为重点讲解。(只作为学习参考使用)

1、准备工作:

新建用户和用户组

<http://wubx.net>

```
[root@daosen ]# groupadd mysql
```

```
[root@daosen ]# useradd -g mysql mysql
```

2. 需要的基础工具:

安装 gcc

```
yum install gcc gcc-c++ kernel-devel
```

or

```
yum groupinstall "Development Tools"
```

安装 cmake

```
yum install cmake
```

```
yum install ncurses-devel
```

3: 编译 mysql-5.5.37.tar.gz

查看官方的编译参数的方法:

```
[root@node1 build]# export VISUAL=vim
```

```
[root@node1 build]# whereis mysqlbug
```

```
mysqlbug: /usr/bin/mysqlbug /usr/share/man/man1/mysqlbug.1.gz
```

```
[root@node1 build]# /usr/bin/mysqlbug
```

GCC: Using built-in specs.

Target: x86_64-redhat-linux

Configured with: ../configure --prefix=/usr --mandir=/usr/share/man --infodir=/usr/share/info --with-

bugurl=http://bugzilla.redhat.com/bugzilla --enable-bootstrap --enable-shared --enable-threads=posix --enable-checking=release --with-system-zlib --enable-__cxa_atexit --disable-libunwind-exceptions --enable-gnu-unique-object --enable-languages=c,c++,objc,obj-c++,java,fortran,ada --enable-java-awt=gtk --disable-dssi --with-

<http://wubx.net>

```
java-home=/usr/lib/jvm/java-1.5.0-gcj-1.5.0.0/jre --enable-libgcj-  
multifile --enable-java-maintainer-mode --with-ecj-  
jar=/usr/share/java/eclipse-ecj.jar --disable-libjava-multilib --  
with-ppl --with-cloog --with-tune=generic --with-arch_32=i686 --  
build=x86_64-redhat-linux
```

Thread model: posix

```
[root@daosen ]# tar zxvf mysql-5.5.37.tar.gz
```

```
[root@daosen ]# cd mysql-5.5.37
```

```
./configure --prefix=/usr/local/mysql --bindir=/usr/local/mysql/bin --sb  
indir=/usr/local/mysql/sbin --sysconfdir=/usr/local/mysql/etc --localstated  
ir=/usr/local/mysql/data --with-mysqld-user=mysql --with-charset=utf8 --wit  
h-extra-charsets=gbk,gb2312,utf8 --with-collation=utf8_general_ci --without  
-debug --with-unix-socket-path=/tmp/mysql.sock --with-mysqld-ldflags=-all-s  
tatic --with-client-ldflags=-all-static --with-big-tables --enable-thread-s  
afe-client --enable-assembler && make && make install
```

编译完成后进入 MYSQL 安装目录

```
[root@daosen ]# cd /opt/software/mysql-5.5.37
```

```
[root@daosen ]# cp support-files/my-huge.cnf /etc/my.cnf
```

```
[root@daosen ]# vi /etc/my.cnf
```

将 datadir 和 socket 文件等修改为实际值。

并且修改权限

```
[root@daosen ]# chown -R mysql:mysql /etc/my.cnf
```

<http://wubx.net>

```
[root@daosen ]# mkdir -p /data/mysql/mytest_3306
```

```
[root@daosen ]# chown -R mysql:mysql /data/mysql/mytest_3306
```

切换用户进入安装目录

```
[root@daosen ]# su - mysql
```

```
[root@daosen ]# cd /usr/local/mysql
```

```
[root@daosen ]# ./scripts/mysql_install_db --
```

```
datadir=/data/mysql/mytest_3306
```

下面的操作和二进制安装一样了.不在累述.

安装成功的测试

进入 MySQL:

输入 mysql

查看数据库里有那些库:

```
mysql>show databases;
```

查看当前数据库里有哪些用户:

```
mysql>select user,host,password from mysql.user;
```

<http://imysql.com> <http://mysqlsupport.cn> 联合出品