Linux下MySQL 5.5、 5.6和5.7的RPM、二进制和 源码安装

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【MySQL】Linux 下 MySQL 5.5、5.6 和 5.7 的 RPM、二进制和源码安

装

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1.2 前言部分

1.2.1 导读和注意事项

各位技术爱好者,看完本文后,你可以掌握如下的技能,也可以学到一些其它你所不知道的知识,~○(∩ ∩)○~:

- ① MySQL 的二进制安装过程(重点)
- ② MySQL 多实例管理 (mysqld_multi)
- ③ MySQL 的源码编译安装过程
- ④ Linux 的逻辑卷的使用
- ⑤ 文件的 MD5 值
- ⑥ 访问 MySQL 的几种客户端工具(Navicat 和 MySQLWorkbench)
- ⑦ 修改 MySQL 的密码
- ⑧ 设置 MySQL 的远程访问
- ⑨ 设置 MySQL 的开机启动以及多实例的开机启动
- ⑩ RPM、二进制和源码编译的优缺点

Tips:

① 本文在itpub(http://blog.itpub.net/26736162)、博客园

(http://www.cnblogs.com/lhrbest)和微信公众号(xiaomaimiaolhr)上有同步更新。

- ② 文章中用到的所有代码、相关软件、相关资料及本文的 pdf 版本都请前往小麦苗的云盘下载,小麦苗的云盘地址见: http://blog.itpub.net/26736162/viewspace-1624453/。
 - ③ 若网页文章代码格式有错乱,请下载 pdf 格式的文档来阅读。
 - ④ 在本篇 BLOG 中,代码输出部分一般放在一行一列的表格中。
 - ⑤ 本文适合于 MySQL 初中级人员阅读, MySQL 大师请略过本文。
 - ⑥ 不喜勿喷。

本文若有错误或不完善的地方请大家多多指正,您的批评指正是我写作的最大动力。

1.3 本文简介

自从去年 3 月份开始写书到现在,基本上大部分内容都写完了。一个字,累! 三个字,真心累! 我也因此错过了很多的东西,当然也收获了很多,一切都随缘吧。现在来说说博客吧,虽然我的博客在这段时间更新比较频繁,但是大多内容都不是来自我的原创,基本都是整理自网络。可能有的朋友就会骂小麦苗了,抄袭抄袭,我不反驳,因为这的确是抄袭。为啥小麦苗要这么做,可能基于这么几个原因吧。第一,干货类的文章,本来原创的内容就少,网上的文章也大多是一个抄一个的,很多内容,原创作者已经很难找到了。第二,个别文章并不是很完善,如果不整理在一块,若下次碰到相同的内容,还是得网上再天翻地覆的搜一遍,太浪费时间了。第三,这些非原创的文章,不仅仅是给网友做参考,更重要的是,小麦苗自己也参考。毕竟人的记忆力是有限的,小麦苗也经常搜索自己的文章,所以,这并不可耻。第四,有的文章写得很好,但是里边有个别地方写得不严谨,或者写得有错误,这个时候,小麦苗整理到自己博客的时候就可以顺便修改过来。说再多,有的网友觉得,这都是借口,好吧。抄袭就是抄袭,再多借口也改变不了抄袭的本质。小麦苗不再多说了,只想说一句,不喜勿喷。

从今天开始,小麦苗会准备 OCM 和 MySQL 的学习。所以,今天就先把 MySQL 的各个版本安装一下吧。要学习 MySQL,估计 5.5、5.6 和 5.7 版本的都需要安装。不过,相比 Oracle 而言, MySQL 还是更好安装一点。

小麦苗出版的书籍: http://blog.itpub.net/26736162/viewspace-2142121/废话已经说了很多了,下面开始安装吧。

1.4 Linux 下各种安装方法比较

在 Windows 下可以使用 NOINSTALL 包和图形化包来安装,在 Linux 下可以使用如下 3 种方式来安装:

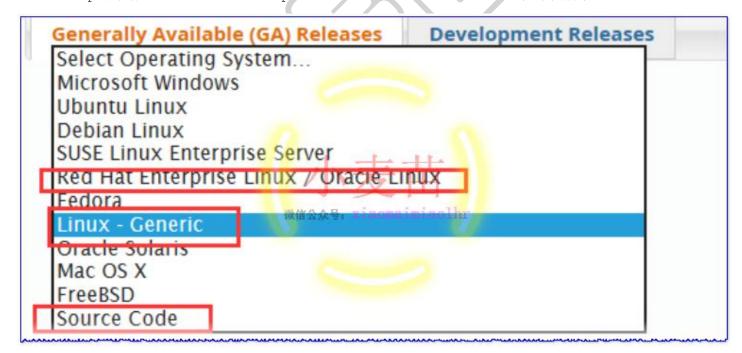
	RPM (Redhat Package Manage)	二进制(Binary Package)	源码(Source Package)
	安装简单,适合初学者学习使用	安装间里;可以安装到任何路径下,灭活性好;一目服务器可以安装多个 MySQL	在实际安装的操作系统进行可根据 需要定制编译,最灵活;性能最好; 一台服务器可以安装多个 MySQL
缺点	需要单独下载客户端和服务器;安装路径不灵活,默认路径不能修改,一台服务器只能安装一个 MySQL	已经经过编译,性能不如源码编译的好;不能灵活定 制编译参数	安装过程较复杂;编译时间长
文件	/usr/sbin: mysqld 服务器 /var/lib/mysql: 日志文件,数据库 /usr/share/doc/packages: 文档 /usr/include/mysql: 包含(头) 文件 /usr/lib/mysql: 库文件 /usr/share/mysql: 错误消息和字	data: 日志文件,数据库 docs: 文档, ChangeLog include: 包含(头)文件 lib: 库 scripts: mysql_install_db 用来初始化系统数 据库	bin: 客户端程序和脚本include/mysql: 包含(头)文件info: Info 格式的文档lib/mysql: 库文件libexec: mysqld 服务器share/mysql: 错误消息文件sql-bench:基准程序和crash-me测试var: 数据库和日志文件

	necp.//biog.lepub.nec/20/30102					
	/usr/share/sql-bench: 基准程序					
主要 対程	在大多数情况下,下载 MySQL-server和 MySQL-client 就可以了,安装方法如下: rpm -ivh MySQL-server* MySQL-client*	useradd -g mysql mysql 2.安装 tar -xzvf mysql-VERSION-OS.tar.gz -C /mysgl/	除了第二步的安装过程外,其它步骤和二进制基本一样(MySQL 5.7开始使用 cmake): gunzip < mysql-VERSION.tar.gz tar -xvf - cd mysql-VERSION ./configureprefix=/usr/local/mysql make && make install			
安装包裁项	Red Hat Enterprise Linux / Oracle Linux	Linux - Generic	Source Code			

rpm 的安装方式请参考:

http://blog.itpub.net/26736162/viewspace-1349705/ http://blog.itpub.net/26736162/viewspace-1349787/

官网中相应地有以上三种方式对应的下载链接,其中源码安装,对应"Source Code"; .tar.gz 对应"Linux - Generic", .rpm 则对应于"Red Hat Enterprise Linux / Oracle Linux", 如下图所示,



1.5 注意事项

- 1. 目录大小。MySQL 5.7 的二进制安装后大约 3G, 所以可以分配 5G 空间; 而 5.5 和 5.6 版本的二进制包安装可以分配 2G 左右。
 - 2. MySQL 5.7 的源码包需要分配 10G 的空间。cmake 最低需要 2.8.2 版本。
 - 3. 下载和上传后需要校验 md5 值, 防止上传的文件不完整。
 - 4. 源码编译安装比较费时费力。

1.6 MySQL 下载

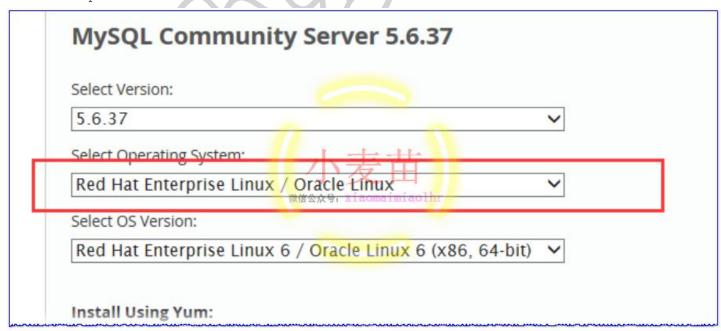
在官网: http://dev.mysql.com/downloads/mysql/中,选择以下版本的 MySQL 下载:



注意: MD5: dbe7e5e820377c29d8681005065e5728, 下载完成后需要校验。

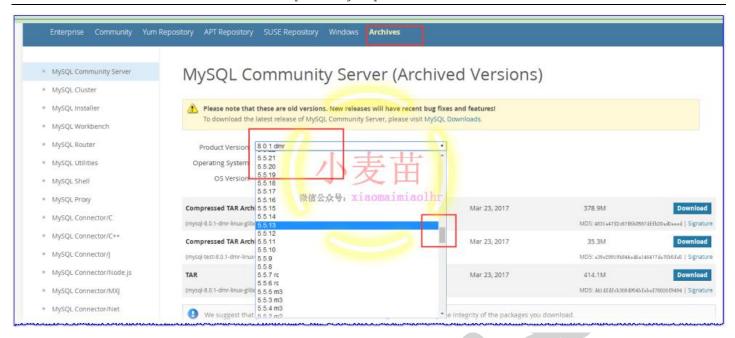
感觉 MySQL 的安装包越来越大了,不过相比 Oracle 而言,就小的多了。小麦苗已经将安装文件放到云盘了,参考: http://blog.itpub.net/26736162/viewspace-1624453/。

注意:不要下载 rpm 类型的包,安装路径不灵活,默认路径不能修改,一台服务器只能 MySQL 安装一个 MySQL。下图下载后均是 rpm 包:



1.6.1 历史 MySQL 版本下载

地址: https://downloads.mysql.com/archives/community/, 最早版本只能看到 5.0.15



1.7 MySQL 5.7 安装

1.7.1 下载

在官网: http://dev.mysql.com/downloads/mysql/中,选择以下版本的 MySQL 下载:



注意: MD5: dbe7e5e820377c29d8681005065e5728, 下载完成后需要校验。

1.7.2 os 路径设置

我们约定:

\$4113×47C.	
项目	source db
db 类型	MySQL 5.7.19
db version	5.7.19
db 存储	Linux 文件系统

OS 版本及 kernel 版本	RHEL 6.5
os 主机名	LHRDB
OS IP地址	192.168.59.159
安装文件下载目录	/tmp/mysq15719
MySQL 目录安装位置	/var/lib/mysql57/mysql5719
数据库保存位置	/var/lib/mysql57/mysql5719/data
日志保存位置	/var/lib/mysql57/mysql5719/log
配置文件地址	/etc/my.cnf

需要注意的是,安装文件解压后大小大约为 2.6G,比 MySQL 5.6 大多了,我记得 5.6 版本解压后还不到 1G。 所以,这里安装目录给 5G 大小。

下面开始准备 OS。使用以前就安装好的 OS,文件系统采用逻辑卷的管理方式,如下所示:

```
[root@LHRDB ~] # df -h
Filesystem
                        Size Used Avail Use% Mounted on
/dev/mapper/vg rootlhr-Vol00 9.9G 4.9G 4.6G 52% /
                       2.0G 72K 2.0G 1% /dev/shm
/dev/sda1
                        194M 35M 150M 19% /boot
/dev/mapper/vg_rootlhr-Vol01 3.0G 70M 2.8G 3% /tmp
/dev/mapper/vg_rootlhr-Vol03 3.0G 69M 2.8G 3% /home
                        331G 272G 59G 83% /mnt/hqfs
.host:/
[root@LHRDB ~]# lvs
 LV VG Attr
                     LSize Pool Origin Data% Move Log Cpy%Sync Convert
 Vol00 vg rootlhr -wi-ao---- 10.00g
 Vol01 vg rootlhr -wi-ao--- 3.00g
 Vol02 vg_rootlhr -wi-ao--- 2.00g
 Vol03 vg rootlhr -wi-ao--- 3.00g
[root@LHRDB ~] # pvs
             Fmt Attr PSize PFree
        VG
 /dev/sda2 vg rootlhr lvm2 a-- 10.00g
 /dev/sda3 vg rootlhr lvm2 a-- 9.80g 1.80g
                   lvm2 a-- 10.00g 10.00g
 /dev/sdb1
 /dev/sdb10
                   lvm2 a-- 10.00g 10.00g
 /dev/sdb11
                   lvm2 a-- 9.99g 9.99g
                   lvm2 a-- 10.00g 10.00g
 /dev/sdb2
 /dev/sdb3
                   lvm2 a-- 10.00g 10.00g
 /dev/sdb5
                   lvm2 a-- 10.00g 10.00g
 /dev/sdb6
                  lvm2 a-- 10.00g 10.00g
 /dev/sdb7
                   lvm2 a-- 10.00g 10.00g
                   lvm2 a-- 10.00g 10.00g
 /dev/sdb8
                   lvm2 a-- 10.00g 10.00g
 /dev/sdb9
[root@LHRDB ~] # vgs
      #PV #LV #SN Attr VSize VFree
 vg rootlhr 2 4 0 wz--n- 19.80g 1.80g
[root@LHRDB ~]# vgcreate vg mysqlsoft /dev/sdb1
 Volume group "vg mysqlsoft" successfully created
[root@LHRDB ~]# vgs
           #PV #LV #SN Attr VSize VFree
 vg mysqlsoft 1 0 0 wz--n- 10.00g 10.00g
             2 4 0 wz--n- 19.80g 1.80g
 vg rootlhr
[root@LHRDB ~] # lvcreate -n lv_mysqlsoft_57 -L 5G vg_mysqlsoft
 Logical volume "lv mysqlsoft 57" created
[root@LHRDB ~] # lvs
                        Attr
                               LSize Pool Origin Data% Move Log Cpy%Sync Convert
lv_mysqlsoft_57 vg_mysqlsoft -wi-a---- 5.00g
 Vol00
             vg_rootlhr -wi-ao--- 10.00g
 Vol01
              vg rootlhr -wi-ao--- 3.00g
 Vol02
              vg rootlhr -wi-ao--- 2.00g
              vg rootlhr -wi-ao--- 3.00g
[root@LHRDB ~]# mkfs.ext4 /dev/vg mysqlsoft/lv mysqlsoft 57
mke2fs 1.41.12 (17-May-2010)
Filesystem label=
OS type: Linux
```

```
Block size=4096 (log=2)
Fragment size=4096 (log=2)
Stride=0 blocks, Stripe width=0 blocks
327680 inodes, 1310720 blocks
65536 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=1342177280
40 block groups
32768 blocks per group, 32768 fragments per group
8192 inodes per group
Superblock backups stored on blocks:
      32768, 98304, 163840, 229376, 294912, 819200, 884736
Writing inode tables: done
Creating journal (32768 blocks): done
Writing superblocks and filesystem accounting information: done
This filesystem will be automatically checked every 32 mounts or
180 days, whichever comes first. Use tune2fs -c or -i to override.
[root@LHRDB ~] # mkdir -p /tmp/mysql5719
[root@LHRDB ~]# mkdir -p /var/lib/mysql57
[root@LHRDB ~] # mount /dev/vg_mysqlsoft/lv_mysqlsoft_57 /var/lib/mysql57/
[root@LHRDB ~] # df -h
Filesystem
                                   Size Used Avail Use% Mounted on
/dev/mapper/vg rootlhr-Vol00
                                      9.9G 4.9G 4.6G 52% /
                                   2.0G 72K 2.0G 1% /dev/shm
tmpfs
                                   194M 35M 150M 19% /boot
/dev/sda1
/dev/mapper/vg rootlhr-Vol01
                                      3.0G 680M 2.2G 24% /tmp
                                      3.0G 69M 2.8G 3% /home
/dev/mapper/vg_rootlhr-Vol03
.host:/
                                   331G 272G 59G 83% /mnt/hgfs
/dev/mapper/vg mysqlsoft-lv mysqlsoft 57 5.0G 138M 4.6G 3% /var/lib/mysql57
[root@LHRDB ~]# vi /etc/fstab
[root@LHRDB ~] # more /etc/fstab
# /etc/fstab
# Created by anaconda on Sat Jan 14 18:56:24 2017
# Accessible filesystems, by reference, are maintained under '/dev/disk'
# See man pages fstab(5), findfs(8), mount(8) and/or blkid(8) for more info
/dev/mapper/vg rootlhr-Vol00 /
                                                       defaults
                                                ext4
UUID=fccf51c1-2d2f-4152-baac-99ead8cfbc1a /boot
                                                        ext4 defaults
                                                                                1 2
                                                       defaults
/dev/mapper/vg_rootlhr-Vol01 /tmp
                                                ext4
                                                                     1 2
                                                swap defaults
/dev/mapper/vg_rootlhr-Vol02 swap
                                        tmpfs defaults, size=2G
tmpfs
                   /dev/shm
                                        devpts gid=5, mode=620 0 0
devpts
                    /dev/pts
                                        sysfs defaults 0 0
sysfs
                    /sys
                                        proc defaults
                                                             0 0
proc
                    /proc
/dev/vg rootlhr/Vol03 /home ext4 defaults
                                               0 0
/dev/mapper/vg mysqlsoft-lv mysqlsoft 57 /var/lib/mysql57 ext4 defaults 0 0
```

1.7.2.1 **OS**设置

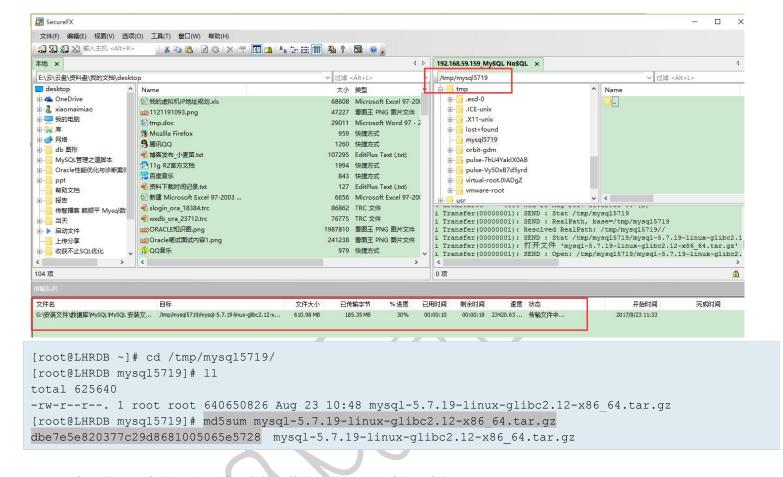
关闭 iptables 防火墙:

```
临时关闭: service iptables stop
永久关闭: chkconfig iptables off
```

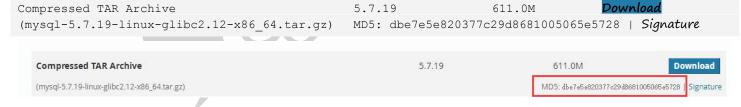
vi /etc/sysconfig/selinux

将 SELINUX 修改为 DISABLED, 即 SELINUX=DISABLED

1.7.3 上传文件并校验 MD5 值



和官网的 MD5 保持一致, 说明安装文件的下载和上传过程没有问题:



1.7.4 安装

```
[root@LHRDB mysql5719]# tar -zxvf mysql-5.7.19-linux-glibc2.12-x86_64/bin/myisam_ftdump
mysql-5.7.19-linux-glibc2.12-x86_64/bin/myisamchk
mysql-5.7.19-linux-glibc2.12-x86_64/bin/myisamlog
mysql-5.7.19-linux-glibc2.12-x86_64/bin/myisampack
mysql-5.7.19-linux-glibc2.12-x86_64/bin/myisampack
mysql-5.7.19-linux-glibc2.12-x86_64/bin/mysql
mysql-5.7.19-linux-glibc2.12-x86_64/bin/mysql_client_test_embedded
mysql-5.7.19-linux-glibc2.12-x86_64/bin/mysql_config_editor
mysql-5.7.19-linux-glibc2.12-x86_64/bin/mysql_embedded
mysql-5.7.19-linux-glibc2.12-x86_64/bin/mysql_install_db
mysql-5.7.19-linux-glibc2.12-x86_64/bin/mysql_plugin
```

```
。。。。。。 省略部分。。。。。。。
mysql-5.7.19-linux-glibc2.12-x86 64/lib/libmysqlclient.so.20
mysql-5.7.19-linux-glibc2.12-x86 64/lib/libmysqlclient.so.20.3.6
mysql-5.7.19-linux-glibc2.12-x86 64/share/install rewriter.sql
mysql-5.7.19-linux-glibc2.12-x86 64/share/uninstall rewriter.sql
mysql-5.7.19-linux-glibc2.12-x86 64/support-files/magic
mysql-5.7.19-linux-qlibc2.12-x86 64/support-files/mysql.server
mysql-5.7.19-linux-glibc2.12-x86 64/docs/INFO BIN
mysql-5.7.19-linux-glibc2.12-x86 64/docs/INFO SRC
[root@LHRDB mysql5719]# df -h
Filesystem
                                   Size Used Avail Use% Mounted on
                                      9.9G 4.9G 4.6G 52% /
/dev/mapper/vg rootlhr-Vol00
                                  2.0G 72K 2.0G 1% /dev/shm
tmpfs
                                   194M 35M 150M 19% /boot
/dev/sda1
/dev/mapper/vg_rootlhr-Vol01
                                      3.0G 680M 2.2G 24% /tmp
/dev/mapper/vg_rootlhr-Vol03
                                      3.0G 69M 2.8G 3% /home
.host:/
                                   331G 272G 59G 83% /mnt/hgfs
/dev/mapper/vg mysqlsoft-lv mysqlsoft 57 5.0G 2.6G 2.2G 55% /var/lib/mysql57
```

1.7.5 重命名安装后的文件夹

```
[root@LHRDB ~]# cd /var/lib/mysql57/
[root@LHRDB mysql57]# 11
total 20
drwx-----. 2 root root 16384 Aug 23 13:21 lost+found
drwxr-xr-x. 9 root root 4096 Aug 23 13:28 mysql-5.7.19-linux-glibc2.12-x86 64
[root@LHRDB mysql57]# mv mysql-5.7.19-linux-glibc2.12-x86 64 mysql5719
[root@LHRDB mysql57]# 11
total 20
drwx-----. 2 root root 16384 Aug 23 13:21 lost+found
drwxr-xr-x. 9 root root 4096 Aug 23 13:28 mysql5719
[root@LHRDB mysql57]#
```

也可以使用 1n 连接:

```
ln -s mysql-5.7.19-linux-glibc2.12-x86 64 mysql5719
```

1.7.6 新建数据和日志文件目录

```
[root@LHRDB mysql57]# mkdir -p /var/lib/mysql57/mysql5719/data
[root@LHRDB mysql57]# mkdir -p /var/lib/mysql57/mysql5719/log
```

1.7.7 用户和组设置

```
groupadd mysql ## 添加一个 mysql 组
useradd -r -g mysql mysql ## 添加一个用户
useradd -r -s /sbin/nologin -g mysql mysql -d /usr/local/mysql #新建 msyql 用户禁止登
```

录 shell

```
[root@LHRDB ~]# groupadd mysql
groupadd: group 'mysql' already exists
[root@LHRDB ~]# useradd -r -g mysql mysql
useradd: user 'mysql' already exists
```

说明本身就有 mysql 用户和组。

1.7.8 改变目录属有者

```
[root@LHRDB mysql57]# chown -R mysql.mysql /var/lib/mysql57
chown: invalid user: `\226R'
[root@LHRDB mysql57]# cd ..
[root@LHRDB lib]# chown -R mysql.mysql /var/lib/mysql57
```

1.7.9 初始化 **MySQL**

注意: MySQL 5.7.6之后的版本初始化数据库不再使用 mysql_install_db, 但是在 MySQL 5.7.19 里依然保留着这个文件。

官网: https://dev.mysql.com/doc/refman/5.7/en/mysql-install-db.html

mysql install db is deprecated as of MySQL 5.7.6 because its functionality has been integrated into mysqld, the MySQL server. To initialize a MySQL installation, invoke mysqld with the --initialize or --initialize-insecure option. For more information, see Section 2.10.1.1, "Initializing the Data Directory Manually Using mysqld". mysql install db will be removed in a future MySQL release.

```
[root@LHRDB mysql5719]# 11
drwxr-xr-x. 2 mysql mysql 4096 Aug 23 13:27 bin
-rw-r--r-. 1 mysql mysql 17987 Jun 22 22:13 COPYING
drwxr-xr-x. 2 mysql mysql 4096 Aug 23 13:35 data
drwxr-xr-x. 2 mysql mysql 4096 Aug 23 13:28 docs
drwxr-xr-x. 3 mysql mysql 4096 Aug 23 13:27 include
drwxr-xr-x. 5 mysql mysql 4096 Aug 23 13:28 lib
drwxr-xr-x. 2 mysql mysql 4096 Aug 23 13:35 log
drwxr-xr-x. 4 mysql mysql 4096 Aug 23 13:27 man
-rw-r--r-. 1 mysql mysql 2478 Jun 22 22:13 README
drwxr-xr-x. 28 mysql mysql 4096 Aug 23 13:28 share
drwxr-xr-x. 2 mysql mysql 4096 Aug 23 13:28 support-files
[root@LHRDB mysql5719]# ./bin/mysqld --initialize --user=mysql --basedir=/var/lib/mysql57/mysql5719
--datadir=/var/lib/mysql57/mysql5719/data
2017-08-23T05:45:58.820448Z 0 [Warning] TIMESTAMP with implicit DEFAULT value is deprecated. Please use
--explicit_defaults_for_timestamp server option (see documentation for more details).
2017-08-23T05:45:59.123446Z 0 [Warning] InnoDB: New log files created, LSN=45790
2017-08-23T05:45:59.197904Z 0 [Warning] InnoDB: Creating foreign key constraint system tables.
2017-08-23T05:45:59.273227Z 0 [Warning] No existing UUID has been found, so we assume that this is the first
time that this server has been started. Generating a new UUID: 571ab53c-87c6-11e7-ab76-000c291823c2.
2017-08-23T05:45:59.276384Z 0 [Warning] Gtid table is not ready to be used. Table 'mysql.gtid executed' cannot
2017-08-23T05:45:59.277461Z 1 [Note] A temporary password is generated for root@localhost: k;A3Dktywkyj
[root@LHRDB mysql5719]#
```

这里生成的临时密码为: k;A3Dktywkyj 该过程会在 data 目录下生成默认数据库:

```
[root@LHRDB mysql5719]# cd data
[root@LHRDB data]# 11
total 110620
-rw-r---- 1 mysql mysql 56 Aug 23 13:45 auto.cnf
-rw-r--- 1 mysql mysql 420 Aug 23 13:46 ib_buffer_pool
-rw-r--- 1 mysql mysql 12582912 Aug 23 13:46 ibdata1
-rw-r--- 1 mysql mysql 50331648 Aug 23 13:46 ib_logfile0
-rw-r--- 1 mysql mysql 50331648 Aug 23 13:45 ib_logfile1
drwxr-x--- 2 mysql mysql 4096 Aug 23 13:45 mysql
drwxr-x--- 2 mysql mysql 4096 Aug 23 13:45 performance_schema
drwxr-x--- 2 mysql mysql 12288 Aug 23 13:46 sys
[root@LHRDB data]# du -sh .
```

1.7.10 生成秘钥

创建 SSL 和 RSA 文件,关于这部分更多请参考: https://dev.mysql.com/doc/refman/5.7/en/mysql-ssl-rsa-setup.html。 也可以不执行这个步骤。

1.7.11 配置/etc/my.cnf

生产库上根据需要配置更多参数:

```
[root@LHRDB support-files]# more /etc/my.cnf
[client]
port=3306
socket=/var/lib/mysql57/mysql.sock
[mysqld]
basedir=/var/lib/mysql57/mysql5719
datadir=/var/lib/mysql57/mysql5719/data
socket=/var/lib/mysql57/mysql.sock
user=mysql
# Disabling symbolic-links is recommended to prevent assorted security risks
symbolic-links=0
```

```
[mysqld safe]
log-error=/var/lib/mysql57/mysql5719/log/mysqld.log
pid-file=/var/lib/mysql57/mysql5719/data/mysqld.pid
```

1.7.12 配置开机启动文件

```
[root@LHRDB mysql5719]# cd support-files/
[root@LHRDB support-files]# 11
total 24
-rw-r--r-. 1 mysql mysql  773 Jun 22 22:13 magic
-rwxr-xr-x. 1 mysql mysql  1061 Jun 22 22:54 mysqld_multi.server
-rwxr-xr-x. 1 mysql mysql  894 Jun 22 22:54 mysql-log-rotate
-rwxr-xr-x. 1 mysql mysql  10576 Jun 22 22:54 mysql.server
[root@LHRDB support-files]# cp mysql.server /etc/init.d/mysq157
[root@LHRDB support-files]# chmod 755 /etc/init.d/mysq157
[root@LHRDB support-files]# chkconfig --add mysq157
[root@LHRDB support-files]# chkconfig mysq157 on
[root@LHRDB support-files]# chkconfig --level 345 mysq157 on
```

注意: 这里的 MySQL 服务为 mysql57

1.7.13 启动 MySQL

```
[root@LHRDB support-files]# service mysql57 start
Starting MySQL.2017-08-23T06:18:23.060126Z mysqld safe error: log-error set to
'/var/lib/mysql57/mysql5719/log/mysqld.log', however file don't exists. Create writable for user 'mysql'.
The server quit without updating PID file (/var/lib/mysql57/mysql5719/data/LHRDB.pid).[FAILED]
[root@LHRDB support-files]# cd /var/lib/mysql57/mysql5719/log/
[root@LHRDB log]# 11
total 0
[root@LHRDB log]# cd ..
[root@LHRDB mysql5719]# 11
total 60
drwxr-xr-x. 2 mysql mysql 4096 Aug 23 13:27 bin
-rw-r--r-. 1 mysql mysql 17987 Jun 22 22:13 COPYING
drwxr-xr-x. 5 mysql mysql 4096 Aug 23 13:46 data
drwxr-xr-x. 2 mysql mysql 4096 Aug 23 13:28 docs
drwxr-xr-x. 3 mysql mysql 4096 Aug 23 13:27 include
drwxr-xr-x. 5 mysql mysql 4096 Aug 23 13:28 lib
drwxr-xr-x. 2 mysql mysql 4096 Aug 23 13:35 log
drwxr-xr-x. 4 mysql mysql 4096 Aug 23 13:27 man
-rw-r--r-. 1 mysql mysql 2478 Jun 22 22:13 README
drwxr-xr-x. 28 mysql mysql 4096 Aug 23 13:28 share
drwxr-xr-x. 2 mysql mysql 4096 Aug 23 13:28 support-files
[root@LHRDB mysql5719]# echo '' > /var/lib/mysql57/mysql5719/log/mysqld.log
[root@LHRDB mysq15719]# chown mysq1.mysq1 /var/lib/mysq157/mysq15719/log/mysqld.log
[root@LHRDB mysql5719]# service mysql57 start
Starting MySQL.[ OK ]
[root@LHRDB mysql5719]# ps -ef|grep mysql
      18194
                1 0 14:20 pts/1 00:00:00 /bin/sh /var/lib/mysql57/mysql5719/bin/mysqld safe
--datadir=/var/lib/mysql571mysql5719/data --pid-file=/var/lib/mysql571mysql5719/data/LHRDB.pid
      18370 18194 0 14:20 pts/1 00:00:00 /var/lib/mysql57/mysql5719/bin/mysqld
--basedir=/var/lib/mysq157/mysq15719 --datadir=/var/lib/mysq157/mysq15719/data
--plugin-dir=/var/lib/mysql57/mysql5719/lib/plugin --user=mysql
--log-error=/var/lib/mysql57/mysql5719/log/mysqld.log
--pid-file=/var/lib/mysq157/mysq15719/data/LHRDB.pid --socket=/var/lib/mysq157/mysq1.sock
       18407 13196 0 14:21 pts/1 00:00:00 grep mysql
```

```
[root@LHRDB mysql5719]#
```

或者:

```
[root@LHRDB ~]# which mysqld_safe
/var/lib/mysql57/mysql5719/bin/mysqld_safe
[root@LHRDB ~]# mysqld_safe --user=mysql &
[1] 18674
[root@LHRDB ~]# 2017-08-23T06:40:04.996137Z mysqld_safe Logging to
'/var/lib/mysql57/mysql5719/log/mysqld.log'.
2017-08-23T06:40:05.053483Z mysqld_safe Starting mysqld daemon with databases from
/var/lib/mysql57/mysql5719/data
```

1.7.14 配置环境变量

编辑文件/etc/profile,在最后添加如下的内容:

```
MYSQL_HOME=/var/lib/mysql57/mysql5719
PATH=$PATH:$MYSQL_HOME/bin
```

让环境变量生效: source /etc/profile

1.7.15 登录 MySQL 并修改密码

```
[root@LHRDB ~] # mysql -p
Enter password: ---》临时密码为: k; A3Dktywkyj
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 3
Server version: 5.7.19
Copyright (c) 2000, 2017, Oracle and/or its affiliates. All rights reserved.
Oracle is a registered trademark of Oracle Corporation and/or its
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>
mysql> show databases;
ERROR 1820 (HY000): You must reset your password using ALTER USER statement before executing this statement.
mysql> set password=password('lhr');
Query OK, 0 rows affected, 1 warning (0.02 sec)
mysql> show databases;
+----+
| Database
| information_schema |
| mysql
```

修改密码也可以用: update mysql.user set authentication_string=password('lhr') where user='root';

1.7.16 设置远程登录

```
mysql> grant all privileges on *.* to root@'%' identified by 'lhr';
Query OK, 0 rows affected, 1 warning (0.00 sec)
mysql> flush privileges;
Query OK, 0 rows affected (0.00 sec)
mysql> select host,user from mysql.user;
+----+
| host | user |
+----+
| % | root |
| localhost | mysql.session |
| localhost | mysql.sys |
| localhost | root
+-----
4 rows in set (0.00 sec)
[root@LHRDB ~] # mysql -uroot -plhr -h192.168.59.159
mysql: [Warning] Using a password on the command line interface can be insecure.
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 4
Server version: 5.7.19 MySQL Community Server (GPL)
Copyright (c) 2000, 2017, Oracle and/or its affiliates. All rights reserved.
Oracle is a registered trademark of Oracle Corporation and/or its
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>
```

1.7.17 Windows 远程登录

在 Windows 下远程登录:

```
D:\Users\xiaomaimiao>mysql -uroot -plhr -h192.168.59.159

Warning: Using a password on the command line interface can be insecure.

Welcome to the MySQL monitor. Commands end with; or \g.

Your MySQL connection id is 6

Server version: 5.7.19 MySQL Community Server (GPL)

Copyright (c) 2000, 2014, Oracle and/or its affiliates. All rights reserved.
```

Oracle is a registered trademark of Oracle Corporation and/or its 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>

可能会出现下面的错误:

D:\Users\xiaomaimiao>mysql -uroot -plhr -h192.168.59.159
Warning: Using a password on the command line interface can be insecure.
ERROR 2003 (HY000): Can't connect to MySQL server on '192.168.59.159' (10060)

原因: 主机 192.168.59.159 上的防火墙未关闭解决办法: 关闭防火墙,以下 2 个命令都需要执行: chkconfig iptables off ---永久 service iptables stop ---临时

1.7.18 客户端工具登录

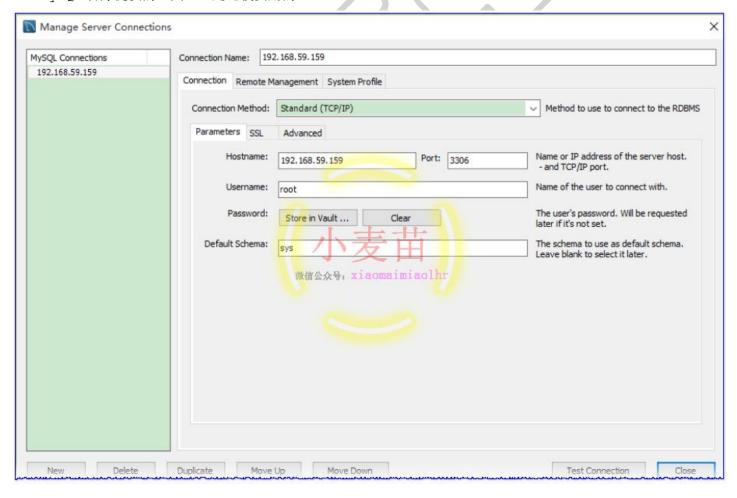
1. 7. 18. 1 Navicat for MySQL





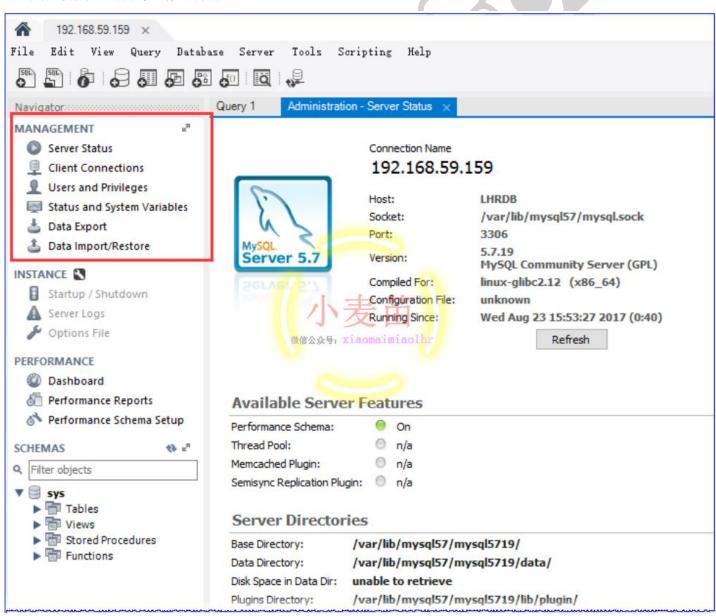
1. 7. 18. 2 MySQLWorkbench

MySQL 官方提供的工具,还是比较实用的:



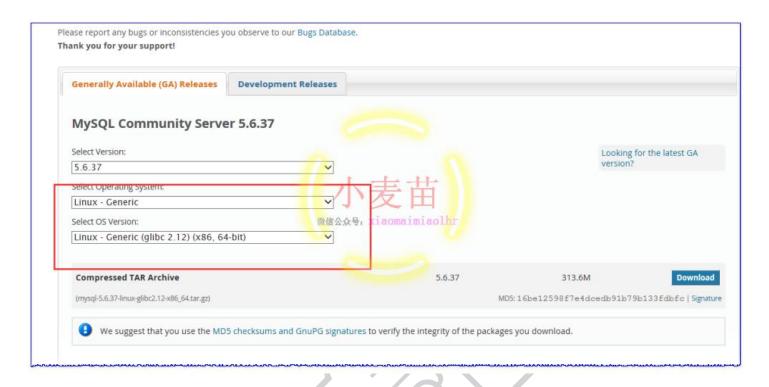


该工具比较强大,有很多的实用功能:



1.8 MySQL 5.6 安装

1.8.1 下载



1.8.2 os 路径设置

```
[root@LHRDB ~] # df -h
Filesystem
                                    Size Used Avail Use% Mounted on
/dev/mapper/vg rootlhr-Vol00
                                       9.9G 4.8G 4.6G 51% /
                                   2.0G 72K 2.0G 1% /dev/shm
tmpfs
/dev/sda1
                                    194M
                                         35M 150M 19% /boot
/dev/mapper/vg rootlhr-Vol01
                                       3.0G 681M 2.2G 24% /tmp
/dev/mapper/vg rootlhr-Vol03
                                       3.0G
                                            69M 2.8G
                                                        3% /home
/dev/mapper/vg mysqlsoft-lv mysqlsoft 57 5.0G 2.7G 2.0G 58% /var/lib/mysql57
.host:/
                                   331G 272G
                                               59G 83% /mnt/hqfs
[root@LHRDB ~] # vgs
            #PV #LV #SN Attr VSize VFree
 vg mysqlsoft 1 1 0 wz--n- 10.00g 5.00g
               2 4 0 wz--n- 19.80g 1.80g
[root@LHRDB ~]# lvcreate -n lv_mysqlsoft_56 -L 2G vg_mysqlsoft
 Logical volume "lv mysqlsoft 56" created
[root@LHRDB ~]# mkfs.ext4 /dev/vg mysqlsoft/lv mysqlsoft 56
mke2fs 1.41.12 (17-May-2010)
Filesystem label=
OS type: Linux
Block size=4096 (log=2)
Fragment size=4096 (log=2)
Stride=0 blocks, Stripe width=0 blocks
131072 inodes, 524288 blocks
26214 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=536870912
16 block groups
32768 blocks per group, 32768 fragments per group
```

```
8192 inodes per group
Superblock backups stored on blocks:
      32768, 98304, 163840, 229376, 294912
Writing inode tables: done
Creating journal (16384 blocks): done
Writing superblocks and filesystem accounting information: done
This filesystem will be automatically checked every 36 mounts or
180 days, whichever comes first. Use tune2fs -c or -i to override.
[root@LHRDB ~]# cd /usr/local/mysql
-bash: cd: /usr/local/mysql: No such file or directory
[root@LHRDB ~]# mkdir /usr/local/mysql56
[root@LHRDB ~] # chown mysql /usr/local/mysql56
[root@LHRDB ~] # mount /dev/vg mysqlsoft/lv mysqlsoft 56 /usr/local/mysql56/
[root@LHRDB ~]# df -h
Filesystem
                                    Size Used Avail Use% Mounted on
/dev/mapper/vg rootlhr-Vol00
                                       9.9G 4.8G 4.6G 51% /
                                   2.0G 72K 2.0G 1% /dev/shm
tmpfs
                                    194M 35M 150M 19% /boot
/dev/sda1
/dev/mapper/vg rootlhr-Vol01
                                       3.0G 681M 2.2G 24% /tmp
/dev/mapper/vg_rootlhr-Vol03
                                      3.0G 69M 2.8G 3% /home
/dev/mapper/vg_mysqlsoft-lv_mysqlsoft_57 5.0G 2.7G 2.0G 58% /var/lib/mysql57
.host:/
                                   331G 272G 59G 83% /mnt/hgfs
/dev/mapper/vg mysqlsoft-lv mysqlsoft 56 2.0G 67M 1.9G 4% /usr/local/mysql56
```

1.8.3 安装 MySQL 5.6

rpm 的安装方式请参考:

http://blog.itpub.net/26736162/viewspace-1349705/ http://blog.itpub.net/26736162/viewspace-1349787/

```
[root@LHRDB mysql56]# tar -zxvf /tmp/mysql-5.6.37-linux-glibc2.12-x86 64.tar.gz -C /usr/local/mysql56/
mysgl-5.6.37-linux-glibc2.12-x86 64/sgl-bench/test-ATIS
mysql-5.6.37-linux-glibc2.12-x86 64/sql-bench/test-select
mysql-5.6.37-linux-glibc2.12-x86 64/sql-bench/crash-me
mysql-5.6.37-linux-glibc2.12-x86 64/sql-bench/test-wisconsin
mysql-5.6.37-linux-glibc2.12-x86 64/sql-bench/innotest1b
mysql-5.6.37-linux-glibc2.12-x86 64/sql-bench/innotest2a
mysgl-5.6.37-linux-glibc2.12-x86 64/sgl-bench/innotest1
mysql-5.6.37-linux-glibc2.12-x86 64/sql-bench/test-create
mysql-5.6.37-linux-glibc2.12-x86 64/sql-bench/bench-count-distinct
。。。。。。。。。。。。省略。。。。。。。。。。
mysql-5.6.37-linux-glibc2.12-x86 64/mysql-test/t/events restart-master.opt
mysql-5.6.37-linux-glibc2.12-x86_64/mysql-test/t/empty_table.test
mysql-5.6.37-linux-glibc2.12-x86 64/mysql-test/t/innodb mrr-master.opt
mysql-5.6.37-linux-glibc2.12-x86 64/mysql-test/t/ssl mode no ssl-master.opt
mysql-5.6.37-linux-glibc2.12-x86 64/mysql-test/valgrind.supp
mysql-5.6.37-linux-glibc2.12-x86 64/mysql-test/mysql-test-run.pl
[root@LHRDB mysq156]# mv mysq1-5.6.37-linux-glibc2.12-x86 64 mysq15637
[root@LHRDB mysql56]# cd mysql5637/
[root@LHRDB mysq15637]# 11
total 68
drwxr-xr-x 2 mysql mysql 4096 Aug 25 18:24 bin
-rw-r--r- 1 mysql mysql 17987 Jun 3 01:42 COPYING
drwxr-xr-x 3 mysql mysql 4096 Aug 25 18:24 data
drwxr-xr-x 2 mysql mysql 4096 Aug 25 18:24 docs
```

```
drwxr-xr-x 3 mysql mysql 4096 Aug 25 18:24 include
drwxr-xr-x 3 mysql mysql 4096 Aug 25 18:24 lib
drwxr-xr-x 4 mysql mysql 4096 Aug 25 18:24 man
drwxr-xr-x 10 mysql mysql 4096 Aug 25 18:24 mysql-test
-rw-r--r- 1 mysql mysql 2496 Jun 3 01:42 README
drwxr-xr-x 2 mysql mysql 4096 Aug 25 18:24 scripts
drwxr-xr-x 28 mysql mysql 4096 Aug 25 18:24 share
drwxr-xr-x 4 mysql mysql 4096 Aug 25 18:24 sql-bench
drwxr-xr-x 2 mysql mysql 4096 Aug 25 18:24 support-files
[root@LHRDB mysql5637] # mkdir log
[root@LHRDB mysql5637]# chown mysql.mysql log
[root@LHRDB mysql5637]# 11
total 72
drwxr-xr-x 2 mysql mysql 4096 Aug 25 18:24 bin
-rw-r--r- 1 mysql mysql 17987 Jun 3 01:42 COPYING
drwxr-xr-x 3 mysql mysql 4096 Aug 25 18:24 data
drwxr-xr-x 2 mysql mysql 4096 Aug 25 18:24 docs
drwxr-xr-x 3 mysql mysql 4096 Aug 25 18:24 include
drwxr-xr-x 3 mysql mysql 4096 Aug 25 18:24 lib
drwxr-xr-x 2 mysql mysql 4096 Aug 25 18:32 log
drwxr-xr-x 4 mysql mysql 4096 Aug 25 18:24 man
drwxr-xr-x 10 mysql mysql 4096 Aug 25 18:24 mysql-test
-rw-r--r- 1 mysql mysql 2496 Jun 3 01:42 README
drwxr-xr-x 2 mysql mysql 4096 Aug 25 18:24 scripts
drwxr-xr-x 28 mysgl mysgl 4096 Aug 25 18:24 share
drwxr-xr-x 4 mysql mysql 4096 Aug 25 18:24 sql-bench
drwxr-xr-x 2 mysql mysql 4096 Aug 25 18:24 support-files
```

1.8.4 初始化

```
[root@LHRDB mysq15637]# ./scripts/mysql install db --user=mysql --basedir=/usr/local/mysq156/mysq15637
--datadir=/usr/local/mysq156/mysq15637/data
Installing MySQL system tables...2017-08-25 18:37:13 0 [Warning] TIMESTAMP with implicit DEFAULT value is
deprecated. Please use --explicit defaults for timestamp server option (see documentation for more details).
2017-08-25 18:37:13 0 [Note] Ignoring --secure-file-priv value as server is running with --bootstrap.
2017-08-25\ 18:37:13\ 0\ [Note]\ /usr/local/mysql56/mysql5637/bin/mysqld\ (mysqld\ 5.6.37)\ starting\ as\ process
2017-08-25 18:37:13 17757 [Note] InnoDB: Using atomics to ref count buffer pool pages
2017-08-25 18:37:13 17757 [Note] InnoDB: The InnoDB memory heap is disabled
2017-08-25 18:37:13 17757 [Note] InnoDB: Mutexes and rw locks use GCC atomic builtins
2017-08-25 18:37:13 17757 [Note] InnoDB: Memory barrier is not used
2017-08-25 18:37:13 17757 [Note] InnoDB: Compressed tables use zlib 1.2.3
2017-08-25 18:37:13 17757 [Note] InnoDB: Using Linux native AIO
2017-08-25 18:37:13 17757 [Note] InnoDB: Using CPU crc32 instructions
2017-08-25 18:37:13 17757 [Note] InnoDB: Initializing buffer pool, size = 128.0M
2017-08-25 18:37:13 17757 [Note] InnoDB: Completed initialization of buffer pool
2017-08-25 18:37:13 17757 [Note] InnoDB: The first specified data file ./ibdata1 did not exist: a new database
to be created!
2017-08-25 18:37:13 17757 [Note] InnoDB: Setting file ./ibdata1 size to 12 MB
2017-08-25 18:37:13 17757 [Note] InnoDB: Database physically writes the file full: wait...
2017-08-25 18:37:13 17757 [Note] InnoDB: Setting log file ./ib logfile101 size to 48 MB
2017-08-25 18:37:13 17757 [Note] InnoDB: Setting log file ./ib logfile1 size to 48 MB
2017-08-25 18:37:13 17757 [Note] InnoDB: Renaming log file ./ib logfile101 to ./ib logfile0
2017-08-25 18:37:13 17757 [Warning] InnoDB: New log files created, LSN=45781
2017-08-25 18:37:13 17757 [Note] InnoDB: Doublewrite buffer not found: creating new
2017-08-25 18:37:13 17757 [Note] InnoDB: Doublewrite buffer created
2017-08-25 18:37:13 17757 [Note] InnoDB: 128 rollback segment(s) are active.
2017-08-25 18:37:13 17757 [Warning] InnoDB: Creating foreign key constraint system tables.
```

```
2017-08-25 18:37:13 17757 [Note] InnoDB: Foreign key constraint system tables created
2017-08-25 18:37:13 17757 [Note] InnoDB: Creating tablespace and datafile system tables.
2017-08-25 18:37:13 17757 [Note] InnoDB: Tablespace and datafile system tables created.
2017-08-25 18:37:13 17757 [Note] InnoDB: Waiting for purge to start
2017-08-25 18:37:13 17757 [Note] InnoDB: 5.6.37 started; log sequence number 0
2017-08-25 18:37:14 17757 [Note] Binlog end
2017-08-25 18:37:14 17757 [Note] InnoDB: FTS optimize thread exiting.
2017-08-25 18:37:14 17757 [Note] InnoDB: Starting shutdown...
2017-08-25 18:37:15 17757 [Note] InnoDB: Shutdown completed; log sequence number 1625977
Filling help tables...2017-08-25 18:37:15 0 [Warning] TIMESTAMP with implicit DEFAULT value is deprecated.
Please use --explicit defaults for timestamp server option (see documentation for more details).
2017-08-25 18:37:15 0 [Note] Ignoring --secure-file-priv value as server is running with --bootstrap.
2017-08-25 18:37:15 0 [Note] /usr/local/mysq156/mysq15637/bin/mysqld (mysqld 5.6.37) starting as process
17779 ...
2017-08-25 18:37:15 17779 [Note] InnoDB: Using atomics to ref count buffer pool pages
2017-08-25 18:37:15 17779 [Note] InnoDB: The InnoDB memory heap is disabled
2017-08-25 18:37:15 17779 [Note] InnoDB: Mutexes and rw locks use GCC atomic builtins
2017-08-25 18:37:15 17779 [Note] InnoDB: Memory barrier is not used
2017-08-25 18:37:15 17779 [Note] InnoDB: Compressed tables use zlib 1.2.3
2017-08-25 18:37:15 17779 [Note] InnoDB: Using Linux native AIO
2017-08-25 18:37:15 17779 [Note] InnoDB: Using CPU crc32 instructions
2017-08-25 18:37:15 17779 [Note] InnoDB: Initializing buffer pool, size = 128.0M
2017-08-25 18:37:15 17779 [Note] InnoDB: Completed initialization of buffer pool
2017-08-25 18:37:15 17779 [Note] InnoDB: Highest supported file format is Barracuda.
2017-08-25 18:37:15 17779 [Note] InnoDB: 128 rollback segment(s) are active.
2017-08-25 18:37:15 17779 [Note] InnoDB: Waiting for purge to start
2017-08-25 18:37:15 17779 [Note] InnoDB: 5.6.37 started; log sequence number 1625977
2017-08-25 18:37:15 17779 [Note] Binlog end
2017-08-25 18:37:15 17779 [Note] InnoDB: FTS optimize thread exiting.
2017-08-25 18:37:15 17779 [Note] InnoDB: Starting shutdown...
2017-08-25 18:37:17 17779 [Note] InnoDB: Shutdown completed; log sequence number 1625987
To start mysqld at boot time you have to copy
support-files/mysql.server to the right place for your system
PLEASE REMEMBER TO SET A PASSWORD FOR THE MySQL root USER !
To do so, start the server, then issue the following commands:
 /usr/local/mysq156/mysq15637/bin/mysqladmin -u root password 'new-password'
 /usr/local/mysql56/mysql5637/bin/mysqladmin -u root -h LHRDB password 'new-password'
Alternatively you can run:
 /usr/local/mysql56/mysql5637/bin/mysql_secure_installation
which will also give you the option of removing the test
databases and anonymous user created by default. This is
strongly recommended for production servers.
See the manual for more instructions.
You can start the MySQL daemon with:
 cd . ; /usr/local/mysql56/mysql5637/bin/mysqld safe &
You can test the MySQL daemon with mysql-test-run.pl
 cd mysql-test; perl mysql-test-run.pl
Please report any problems at http://bugs.mysql.com/
```

```
The latest information about MySQL is available on the web at
 http://www.mysql.com
Support MySQL by buying support/licenses at http://shop.mysql.com
New default config file was created as /usr/local/mysgl56/mysgl5637/my.cnf and
will be used by default by the server when you start it.
You may edit this file to change server settings
WARNING: Default config file /etc/my.cnf exists on the system
This file will be read by default by the MySQL server
If you do not want to use this, either remove it, or use the
--defaults-file argument to mysqld safe when starting the server
[root@LHRDB mysql5637]# cd data
[root@LHRDB data]# 11
total 110604
-rw-rw---- 1 mysql mysql 12582912 Aug 25 18:37 ibdata1
-rw-rw---- 1 mysql mysql 50331648 Aug 25 18:37 ib logfile0
-rw-rw---- 1 mysql mysql 50331648 Aug 25 18:37 ib logfile1
drwx----- 2 mysql mysql 4096 Aug 25 18:37 mysql
drwx----- 2 mysql mysql 4096 Aug 25 18:37 performance_schema
drwxr-xr-x 2 mysql mysql 4096 Aug 25 18:24 test
```

1.8.5 配置参数文件并启动 MySQL

```
[root@LHRDB mysql5637]# more ./support-files/my.cnf
[mysqld]
basedir=/usr/local/mysq156/mysq15637
datadir=/usr/local/mysq156/mysq15637/data
socket=/usr/local/mysql56/mysql5637/mysql.sock
log-error=/usr/local/mysql56/mysql5637/log/mysqld.log
user=mysql
port=3307
[root@LHRDB mysq15637]# echo '' > /usr/local/mysq156/mysq15637/log/mysq1d.log
[root@LHRDB mysq15637] # ./bin/mysqld safe --defaults-file=./support-files/my.cnf &
[2] 13852
[root@LHRDB mysql5637] # 170827 17:52:15 mysqld safe Logging to
'/usr/local/mysql56/mysql5637/log/mysqld.log'.
170827 17:52:15 mysqld safe Starting mysqld daemon with databases from /usr/local/mysql56/mysql5637/data
[root@LHRDB mysql5637]# ps -ef|grep mysql
root 13195 13170 0 17:35 pts/0 00:00:00 tail -f /var/lib/mysql57/mysql5719/log/mysqld multi.log
       13671 13198 0 17:45 pts/1 00:00:00 /bin/sh ./bin/mysqld safe
root
--defaults-file=./support-files/my.cnf
      13811 13671 0 17:45 pts/1 00:00:00 /usr/local/mysq155/mysq15557/bin/mysqld
mysql
--defaults-file=./support-files/my.cnf --basedir=/usr/local/mysq155/mysq15557
--datadir=/usr/local/mysq155/mysq15557/data --plugin-dir=/usr/local/mysq155/mysq15557/lib/plugin
--user=mysql --log-error=/usr/local/mysql555/mysql5557/log/mysqld.log --pid-file=LHRDB.pid
--socket=/usr/local/mysql55/mysql5557/mysql.sock --port=3308
       13852 13198 0 17:52 pts/1 00:00:00 /bin/sh ./bin/mysqld safe
--defaults-file=./support-files/my.cnf
mysql
      13990 13852 10 17:52 pts/1 00:00:00 /usr/local/mysq156/mysq15637/bin/mysqld
--defaults-file=./support-files/my.cnf --basedir=/usr/local/mysq156/mysq15637
--datadir=/usr/local/mysq156/mysq15637/data --plugin-dir=/usr/local/mysq156/mysq15637/lib/plugin
--user=mysql --log-error=/usr/local/mysql56/mysql5637/log/mysqld.log --pid-file=LHRDB.pid
--socket=/usr/local/mysql56/mysql5637/mysql.sock --port=3307
root 14015 13198 0 17:52 pts/1 00:00:00 grep mysql
```

1.8.6 修改密码

MySQL 5.6 的二进制安装默认密码为空。 set password=password('lhr');

```
[root@LHRDB mysql5719] # mysql -uroot --socket=/usr/local/mysql56/mysql5637/mysql.sock -p
Enter password:
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 4
Server version: 5.6.37 MySQL Community Server (GPL)
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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> set password=password("lhr");
Query OK, 0 rows affected (0.02 sec)
mysql> show databases;
+----+
| Database |
| information schema |
| mysql |
| performance schema |
| test |
4 rows in set (0.00 sec)
```

1.8.7 设置远程登录

1.8.8 远程登录



```
D:\Users\xiaomaimiao>mysql -uroot -plhr -h192.168.59.159 -P 3307

Warning: Using a password on the command line interface can be insecure.

Welcome to the MySQL monitor. Commands end with; or \g.

Your MySQL connection id is 6

Server version: 5.6.37 MySQL Community Server (GPL)

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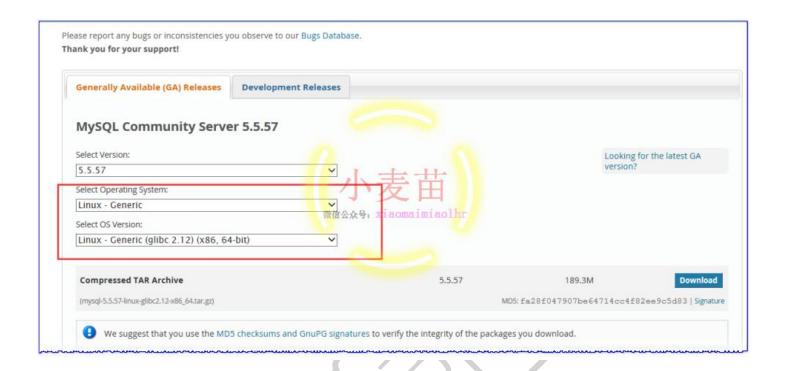
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Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql>
```

1.9 MySQL 5.5 安装

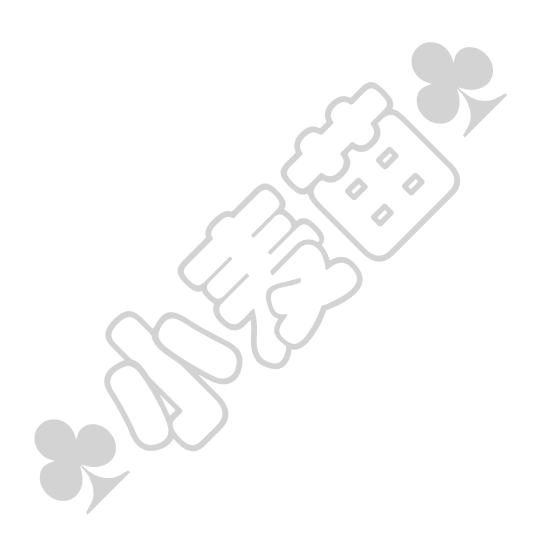
1.9.1 下载



1.9.2 os 路径设置

```
[root@LHRDB ~]# lvcreate -n lv mysqlsoft 55 -L 2G vg mysqlsoft
 Logical volume "lv mysqlsoft 55" created
[root@LHRDB ~]# mkfs.ext4 /dev/vg mysqlsoft/lv mysqlsoft 55
mke2fs 1.41.12 (17-May-2010)
Filesystem label=
OS type: Linux
Block size=4096 (log=2)
Fragment size=4096 (log=2)
Stride=0 blocks, Stripe width=0 blocks
131072 inodes, 524288 blocks
26214 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=536870912
16 block groups
32768 blocks per group, 32768 fragments per group
8192 inodes per group
Superblock backups stored on blocks:
      32768, 98304, 163840, 229376, 294912
Writing inode tables: done
Creating journal (16384 blocks): done
Writing superblocks and filesystem accounting information: done
This filesystem will be automatically checked every 24 mounts or
180 days, whichever comes first. Use tune2fs -c or -i to override.
[root@LHRDB ~] # mkdir /usr/local/mysql55
[root@LHRDB ~] # chown mysql /usr/local/mysql55
[root@LHRDB ~] # mount /dev/vg mysqlsoft/lv mysqlsoft 55 /usr/local/mysql55/
```

[root@LHRDB ~]# df -h Size Used Avail Use% Mounted on Filesystem /dev/mapper/vg rootlhr-Vol00 9.9G 4.8G 4.6G 52% / tmpfs 2.0G 68K 2.0G 1% /dev/shm /dev/sda1 194M 35M 150M 19% /boot /dev/mapper/vg rootlhr-Vol01 3.0G 1.1G 1.8G 40% /tmp /dev/mapper/vg rootlhr-Vol03 3.0G 69M 2.8G 3% /home /dev/mapper/vg mysqlsoft-lv mysqlsoft 57 5.0G 2.7G 2.0G 58% /var/lib/mysql57 331G 272G 59G 83% /mnt/hgfs .host:/ /dev/mapper/vg mysqlsoft-lv mysqlsoft 56 2.0G 67M 1.9G 4% /usr/local/mysql56 /dev/mapper/vg_mysqlsoft-lv_mysqlsoft_55 2.0G 67M 1.9G 4% /usr/local/mysql55



1.9.3 安装 MySQL 5.5

```
[root@LHRDB mysql56] # tar -zxvf /tmp/mysql-5.5.57-linux-glibc2.12-x86 64.tar.gz -C /usr/local/mysql55
mysql-5.5.57-linux-glibc2.12-x86 64/scripts/mysql install db
mysql-5.5.57-linux-glibc2.12-x86 64/INSTALL-BINARY
mysql-5.5.57-linux-glibc2.12-x86 64/share/slovak/errmsg.sys
mysql-5.5.57-linux-glibc2.12-x86 64/share/norwegian/errmsg.sys
mysql-5.5.57-linux-glibc2.12-x86 64/share/fill help tables.sql
mysql-5.5.57-linux-glibc2.12-x86 64/share/spanish/errmsg.sys
mysql-5.5.57-linux-glibc2.12-x86 64/share/czech/errmsg.sys
mysql-5.5.57-linux-glibc2.12-x86 64/share/dutch/errmsg.sys
。。。。。。。。。。。省略。。。。。。。。。。。。。。
mysql-5.5.57-linux-glibc2.12-x86 64/mysql-test/suite/auth sec/t/secure file priv null-master.opt
mysql-5.5.57-linux-glibc2.12-x86 64/mysql-test/suite/auth sec/t/secure file priv warnings win.test
mysql-5.5.57-linux-glibc2.12-x86_64/mysql-test/suite/auth_sec/t/secure_file_priv_error.test
mysql-5.5.57-linux-glibc2.12-x86 64/mysql-test/suite/auth sec/t/secure file priv null.test
mysql-5.5.57-linux-glibc2.12-x86 64/mysql-test/suite/auth sec/t/secure file priv warnings.test
mysql-5.5.57-linux-glibc2.12-x86 64/mysql-test/suite/auth sec/r/secure file priv warnings.result
mysql-5.5.57-linux-glibc2.12-x86 64/mysql-test/suite/auth sec/r/secure file priv error.result
mysql-5.5.57-linux-glibc2.12-x86 64/mysql-test/suite/auth sec/r/secure file priv warnings win.result
mysql-5.5.57-linux-glibc2.12-x86 64/mysql-test/suite/auth sec/r/secure file priv null.result
mysql-5.5.57-linux-glibc2.12-x86 64/mysql-test/suite/auth sec/r/cert verify.result
mysql-5.5.57-linux-glibc2.12-x86_64/mysql-test/suite/auth_sec/r/secure_file_priv_warnings_not_win.resul
[root@LHRDB tmp]# cd /usr/local/mysql55
[root@LHRDB mysq155]# 11
total 4
drwxr-xr-x 13 root root 4096 Aug 27 17:07 mysql-5.5.57-linux-glibc2.12-x86 64
[root@LHRDB mysql55]#
[root@LHRDB mysq155] # mv mysq1-5.5.57-linux-glibc2.12-x86 64 mysq15557
[root@LHRDB mysql55]# cd mysql5557/
[root@LHRDB mysql5557]# 11
total 72
drwxr-xr-x 2 root root 4096 Aug 27 17:07 bin
-rw-r--r- 1 7161 31415 17987 Jun 5 14:38 COPYING
drwxr-xr-x 3 root root 4096 Aug 27 17:07 data
drwxr-xr-x 2 root root 4096 Aug 27 17:07 docs
drwxr-xr-x 3 root root 4096 Aug 27 17:07 include
-rw-r--r- 1 7161 31415 301 Jun 5 14:38 INSTALL-BINARY
drwxr-xr-x 3 root root 4096 Aug 27 17:07 lib
drwxr-xr-x 4 root root 4096 Aug 27 17:07 man
drwxr-xr-x 10 root root 4096 Aug 27 17:07 mysql-test
-rw-r--r- 1 7161 31415 2496 Jun 5 14:38 README
drwxr-xr-x 2 root root 4096 Aug 27 17:07 scripts
drwxr-xr-x 27 root root 4096 Aug 27 17:07 share
drwxr-xr-x 4 root root 4096 Aug 27 17:07 sql-bench
drwxr-xr-x 2 root root 4096 Aug 27 17:07 support-files
[root@LHRDB mysql5557]# mkdir log
[root@LHRDB mysq15557] # cd ..
[root@LHRDB mysql55]# chown mysql.mysql .
[root@LHRDB mysql55]# chown -R mysql.mysql .
```

1.9.4 初始化

```
[root@LHRDB mysq15557]# 11
total 76
```

```
drwxr-xr-x 2 mysql mysql 4096 Aug 27 17:07 bin
-rw-r--r- 1 mysql mysql 17987 Jun 5 14:38 COPYING
drwxr-xr-x 3 mysql mysql 4096 Aug 27 17:07 data
drwxr-xr-x 2 mysql mysql 4096 Aug 27 17:07 docs
drwxr-xr-x 3 mysql mysql 4096 Aug 27 17:07 include
-rw-r--r- 1 mysql mysql 301 Jun 5 14:38 INSTALL-BINARY
drwxr-xr-x 3 mysql mysql 4096 Aug 27 17:07 lib
drwxr-xr-x 2 mysql mysql 4096 Aug 27 17:10 log
drwxr-xr-x 4 mysql mysql 4096 Aug 27 17:07 man
drwxr-xr-x 10 mysql mysql 4096 Aug 27 17:07 mysql-test
-rw-r--r- 1 mysql mysql 2496 Jun 5 14:38 README
drwxr-xr-x 2 mysql mysql 4096 Aug 27 17:07 scripts
drwxr-xr-x 27 mysql mysql 4096 Aug 27 17:07 share
drwxr-xr-x 4 mysql mysql 4096 Aug 27 17:07 sql-bench
drwxr-xr-x 2 mysql mysql 4096 Aug 27 17:07 support-files
[root@LHRDB mysql5557]# pwd
/usr/local/mysq155/mysq15557
[root@LHRDB mysql5557]# ./scripts/mysql_install_db --user=mysql --basedir=/usr/local/mysql555/mysql5557
--datadir=/usr/local/mysql55/mysql5557/data
Installing MySQL system tables...
170827 17:12:09 [Note] Ignoring --secure-file-priv value as server is running with --bootstrap.
170827\ 17:12:09\ [\texttt{Note}]\ / \texttt{usr/local/mysql555/mysql5557/bin/mysqld}\ (\texttt{mysqld}\ 5.5.57)\ \texttt{starting}\ \texttt{as}\ \texttt{process}\ 19995\ \dots
Filling help tables...
170827 17:12:10 [Note] Ignoring --secure-file-priv value as server is running with --bootstrap.
170827 17:12:10 [Note] /usr/local/mysql555/mysql5557/bin/mysqld (mysqld5.5.57) starting as process 20002 ...
To start mysqld at boot time you have to copy
support-files/mysql.server to the right place for your system
PLEASE REMEMBER TO SET A PASSWORD FOR THE MySQL root USER !
To do so, start the server, then issue the following commands:
/usr/local/mysq155/mysq15557/bin/mysqladmin -u root password 'new-password'
/usr/local/mysql555/mysql5557/bin/mysqladmin -u root -h LHRDB password 'new-password'
Alternatively you can run:
/usr/local/mysql55/mysql5557/bin/mysql_secure_installation
which will also give you the option of removing the test
databases and anonymous user created by default. This is
strongly recommended for production servers.
See the manual for more instructions.
You can start the MySQL daemon with:
cd /usr/local/mysq155/mysq15557 ; /usr/local/mysq155/mysq15557/bin/mysqld_safe &
You can test the MySQL daemon with mysql-test-run.pl
cd /usr/local/mysq155/mysq15557/mysq1-test; perl mysql-test-run.pl
Please report any problems at http://bugs.mysql.com/
[root@LHRDB mysq15557]# 11
total 76
drwxr-xr-x 2 mysql mysql 4096 Aug 27 17:07 bin
-rw-r--r- 1 mysql mysql 17987 Jun 5 14:38 COPYING
drwxr-xr-x 5 mysql mysql 4096 Aug 27 17:12 data
drwxr-xr-x 2 mysql mysql 4096 Aug 27 17:07 docs
drwxr-xr-x 3 mysql mysql 4096 Aug 27 17:07 include
-rw-r--r-- 1 mysql mysql
                          301 Jun 5 14:38 INSTALL-BINARY
drwxr-xr-x 3 mysql mysql 4096 Aug 27 17:07 lib
drwxr-xr-x 2 mysql mysql 4096 Aug 27 17:10 log
```

```
drwxr-xr-x 4 mysql mysql 4096 Aug 27 17:07 man
drwxr-xr-x 10 mysql mysql 4096 Aug 27 17:07 mysql-test
-rw-r--r- 1 mysql mysql 2496 Jun 5 14:38 README
drwxr-xr-x 2 mysql mysql 4096 Aug 27 17:07 scripts
drwxr-xr-x 27 mysql mysql 4096 Aug 27 17:07 share
drwxr-xr-x 4 mysql mysql 4096 Aug 27 17:07 sql-bench
drwxr-xr-x 2 mysql mysql 4096 Aug 27 17:07 support-files
[root@LHRDB mysql5557]# cd data/
[root@LHRDB data]# 11
total 12
drwx----- 2 mysql root 4096 Aug 27 17:12 mysql
drwx----- 2 mysql mysql 4096 Aug 27 17:12 performance schema
drwxr-xr-x 2 mysql mysql 4096 Aug 27 17:07 test
[root@LHRDB data] # df -h
                                   Size Used Avail Use% Mounted on
Filesystem
/dev/mapper/vg rootlhr-Vol00
                                       9.9G 4.6G 4.9G 49% /
tmpfs
                                   2.0G 68K 2.0G 1% /dev/shm
/dev/sda1
                                   194M 35M 150M 19% /boot
                                      3.0G 1.2G 1.7G 42% /tmp
/dev/mapper/vg rootlhr-Vol01
                                      3.0G 69M 2.8G
                                                       3% /home
/dev/mapper/vg rootlhr-Vol03
/dev/mapper/vg mysqlsoft-lv mysqlsoft 57 5.0G 2.7G 2.0G 58% /var/lib/mysql57
.host:/
                                   331G 273G 58G 83% /mnt/hgfs
/dev/mapper/vg mysqlsoft-lv mysqlsoft 56 2.0G 1.4G 575M 70% /usr/local/mysql56
/dev/mapper/vg_mysqlsoft-lv_mysqlsoft_55 2.0G 848M 1.1G 45% /usr/local/mysql55
```

1.9.5 配置参数文件并启动 MySQL

```
[root@LHRDB support-files]# more my.cnf
[mysqld]
basedir=/usr/local/mysq155/mysq15557
datadir=/usr/local/mysq155/mysq15557/data
socket=/usr/local/mysq155/mysq15557/mysq1.sock
log-error=/usr/local/mysql55/mysql5557/log/mysqld.log
user=mysql
port=3308
[root@LHRDB support-files]# cd ..
[root@LHRDB mysql5557]#
[root@LHRDB mysql5557]# echo '' > /usr/local/mysql555/mysql5557/log/mysqld.log
[root@LHRDB mysql5557]#
[root@LHRDB mysql5557]# ./bin/mysqld safe --defaults-file=./support-files/my.cnf &
[1] 13671
[root@LHRDB mysql5557] # 170827 17:45:54 mysqld safe Logging to
'/usr/local/mysql55/mysql5557/log/mysqld.log'.
170827 17:45:54 mysqld safe Starting mysqld daemon with databases from /usr/local/mysql55/mysql5557/data
[root@LHRDB mysql5557]# ps -ef|grep mysql
       13195 13170 0 17:35 pts/0 00:00:00 tail -f /var/lib/mysql57/mysql5719/log/mysqld multi.log
root.
      13671 13198 0 17:45 pts/1 00:00:00 /bin/sh ./bin/mysqld safe
root
--defaults-file=./support-files/my.cnf
mysql 13811 13671 0 17:45 pts/1 00:00:00 /usr/local/mysql55/mysql5557/bin/mysqld
--defaults-file=./support-files/my.cnf --basedir=/usr/local/mysq155/mysq15557
--datadir=/usr/local/mysql55/mysql5557/data --plugin-dir=/usr/local/mysql55/mysql5557/lib/plugin
--user=mysql --log-error=/usr/local/mysql555/mysql5557/log/mysqld.log --pid-file=LHRDB.pid
--socket=/usr/local/mysql55/mysql5557/mysql.sock --port=3308
root 13830 13198 0 17:45 pts/1 00:00:00 grep mysql
```

1.9.6 修改密码

MySQL 5.5 的二进制安装默认密码为空。 set password=password('lhr');

```
[root@LHRDB mysql5719]# mysql -uroot --socket=/usr/local/mysql5557/mysql.sock -p
Welcome to the MySQL monitor. Commands end with; or \q.
Your MySQL connection id is 4
Server version: 5.6.37 MySQL Community Server (GPL)
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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> set password=password("lhr");
Query OK, 0 rows affected (0.02 sec)
mysql> show databases;
+----+
| Database |
+----+
| information schema |
| mysql |
| performance schema |
| test |
+----+
4 rows in set (0.00 sec)
```

1.9.7 设置远程登录

```
mysql> select host, user from mysql.user;
        user
host
| 127.0.0.1 | root
::1
          root
lhrdb
lhrdb
          root
localhost
| localhost | root |
6 rows in set (0.00 sec)
mysql> grant all privileges on *.* to root@'%' identified by 'lhr';
Query OK, 0 rows affected, 1 warning (0.00 sec)
mysql> flush privileges;
Query OK, 0 rows affected (0.00 sec)
mysql> select host,user from mysql.user;
+----+
```

1.9.8 远程登录

```
D:\Users\xiaomaimiao>mysql -uroot -plhr -h192.168.59.159 -P 3308
Warning: Using a password on the command line interface can be insecure.
Welcome to the MysQL monitor. Commands end with; or \g.
Your MysQL connection id is 9
Server version: 5.5.57 MysQL Community Server (GPL)

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

mysql>
```

1.10 配置多版本、多实例开机自启动

1.10.1 配置/etc/my.cnf

```
[root@LHRDB support-files]# more /etc/my.cnf
[mysqld_multi]
mysqld=mysqld_safe
mysqladmin=/var/lib/mysql57/mysql5719/bin/mysqladmin
log=/var/lib/mysql57/mysql5719/log/mysqld_multi.log
user=root
pass=lhr

[client]
port=3306
socket=/var/lib/mysql57/mysql5719/mysql.sock
user=root
host=localhost
password=lhr
```

```
[mysqld]
basedir=/var/lib/mysql57/mysql5719
datadir=/var/lib/mysql57/mysql5719/data
socket=/var/lib/mysql57/mysql5719/mysql.sock
log-error=/var/lib/mysql57/mysql5719/log/mysqld.log
user=mysql
port=3306
[mysqld56]
basedir=/usr/local/mysq156/mysq15637
datadir=/usr/local/mysql56/mysql5637/data
socket=/usr/local/mysql56/mysql5637/mysql.sock
log-error=/usr/local/mysql56/mysql5637/log/mysqld.log
user=mysql
port=3307
[mysqld55]
basedir=/usr/local/mysq155/mysq15557
datadir=/usr/local/mysq155/mysq15557/data
socket=/usr/local/mysq155/mysq15557/mysql.sock
log-error=/usr/local/mysq155/mysq15557/log/mysqld.log
user=mysql
port=3308
# Disabling symbolic-links is recommended to prevent assorted security risks
symbolic-links=0
[mysqld safe]
log-error=/var/lib/mysql57/mysql5719/log/mysqld.log
#pid-file=/var/lib/mysql57/mysql5719/data/mysqld.pid
```

1.10.2 配置开机启动

```
[root@LHRDB mysql5719]# cd support-files/
[root@LHRDB support-files]# 11
total 24
-rw-r--r-. 1 mysql mysql  773 Jun 22 22:13 magic
-rwxr-xr-x. 1 mysql mysql  1061 Jun 22 22:54 mysqld_multi.server
-rwxr-xr-x. 1 mysql mysql  894 Jun 22 22:54 mysql-log-rotate
-rwxr-xr-x. 1 mysql mysql  10576 Jun 22 22:54 mysql.server
[root@LHRDB support-files]# cp mysqld_multi.server /etc/init.d/mysqld_multi
[root@LHRDB support-files]# chmod 755 /etc/init.d/mysqld_multi
[root@LHRDB support-files]# chkconfig --add mysqld_multi
[root@LHRDB support-files]# chkconfig mysqld_multi on
[root@LHRDB support-files]# chkconfig --level 345 mysqld_multi on
```

注意: 这里的 MySQL 服务为 mysqld_multi 编辑文件: /etc/init.d/mysqld multi, 修改如下 3 行的参数值:

```
. /etc/profile
basedir=/var/lib/mysq157/mysq15719
bindir=/var/lib/mysq157/mysq15719/bin
```

由于采用了 mysqld_multi 来统一管理 MySQL 的实例,所以,去掉 mysql 5.7 的开机启动。chkconfig mysgl57 off

[root@LHRDB init.d]# chkconfig mysql57 off

重启机器,试试效果:

重启之后:

```
[root@LHRDB ~]# ps -ef|grep mysql
               1 0 20:19 ?
                                   00:00:00 /bin/sh /var/lib/mysql57/mysql5719/bin/mysqld safe
--basedir=/var/lib/mysq157/mysq15719 --datadir=/var/lib/mysq157/mysq15719/data
--socket=/var/lib/mysql57/mysql5719/mysql.sock --log-error=/var/lib/mysql57/mysql5719/log/mysqld.log
--user=mysql --port=3306
       12401
               1 0 20:19 ?
                                   00:00:00 /bin/sh /var/lib/mysql57/mysql5719/bin/mysqld safe
--basedir=/usr/local/mysq156/mysq15637 --datadir=/usr/local/mysq156/mysq15637/data
--socket=/usr/local/mysq156/mysq15637/mysql.sock
--log-error=/usr/local/mysq156/mysq15637/log/mysqld.log --user=mysql --port=3307
       12471
                1 0 20:19 ?
                                  00:00:00 /bin/sh /var/lib/mysql57/mysql5719/bin/mysqld safe
--basedir=/usr/local/mysq155/mysq15557 --datadir=/usr/local/mysq155/mysq15557/data
--socket=/usr/local/mysq155/mysq15557/mysq1.sock
--log-error=/usr/local/mysq1555/mysq15557/log/mysqld.log --user=mysql --port=3308 --symbolic-links=0
mysql 12792 12471 0 20:19 ?
                                  00:00:00 /usr/local/mysq155/mysq15557/bin/mysqld
--basedir=/usr/local/mysq155/mysq15557 --datadir=/usr/local/mysq155/mysq15557/data
--plugin-dir=/usr/local/mysq155/mysq15557/lib/plugin --user=mysql --symbolic-links=0
--log-error=/usr/local/mysq1555/mysq15557/log/mysqld.log --pid-file=LHRDB.pid
--socket=/usr/local/mysql55/mysql5557/mysql.sock --port=3308
       12822 12338 0 20:19 ?
                                    00:00:00 /var/lib/mysql57/mysql5719/bin/mysqld
--basedir=/var/lib/mysq157/mysq15719 --datadir=/var/lib/mysq157/mysq15719/data
--plugin-dir=/var/lib/mysql57/mysql5719/lib/plugin --user=mysql
--log-error=/var/lib/mysq157/mysq15719/log/mysqld.log --pid-file=LHRDB.pid
--socket=/var/lib/mysql57/mysql5719/mysql.sock --port=3306
       12885 12401 0 20:19 ?
                                   00:00:00 /usr/local/mysql56/mysql5637/bin/mysqld
--basedir=/usr/local/mysq156/mysq15637 --datadir=/usr/local/mysq156/mysq15637/data
--plugin-dir=/usr/local/mysq156/mysq15637/lib/plugin --user=mysql
--log-error=/usr/local/mysq156/mysq15637/log/mysq1d.log --pid-file=LHRDB.pid
--socket=/usr/local/mysq156/mysq15637/mysql.sock --port=3307
      13205 13179 0 20:20 pts/0 00:00:00 grep mysql
[root@LHRDB ~]# mysqld multi report
Reporting MySQL servers
MySQL server from group: mysqld57 is running
MySQL server from group: mysqld56 is running
MySQL server from group: mysqld55 is running
[root@LHRDB ~] # netstat -lntp | grep mysqld
              0 0.0.0.0:3308
                                          0.0.0.0:*
                                                                   LISTEN
                                                                              12792/mysqld
tcp
         0
         0
              0 :::3307
                                          :::*
                                                                  LISTEN
                                                                             12885/mysqld
tcp
              0 :::3306
                                          :::*
                                                                  LISTEN
                                                                             12822/mysqld
tcp
         0
```

1.10.3 mysqld multi命令

启动全部实例: mysqld_multi start 查看全部实例状态: mysqld_multi report 启动单个实例: mysqld_multi start 3306 停止单个实例: mysqld_multi stop 3306 查看单个实例状态: mysqld multi report 3306

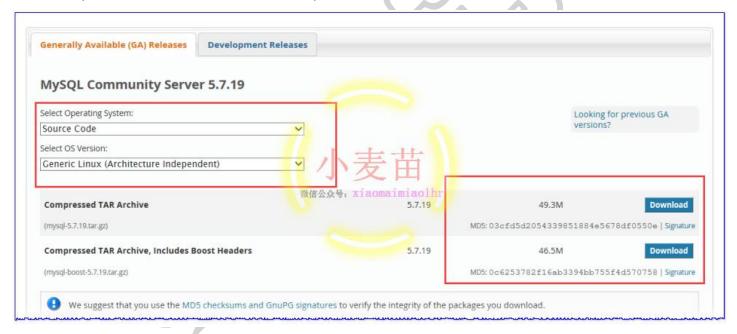
官网地址: https://dev.mysql.com/doc/refman/5.7/en/mysqld-multi.html

1.11 源码编译安装 MySQL 5.7

源码编译安装的更多内容: http://blog.itpub.net/26736162/viewspace-2144212/

1.11.1 下载源码包

地址: https://dev.mysql.com/downloads/mysql/



说明:这里有两个包,在5.7以后,必须要有 boost 这个包

1.11.2 增加用户

```
groupadd mysql
useradd -r -g mysql mysql
```

其中-r表示用户是系统用户,不可登录系统。

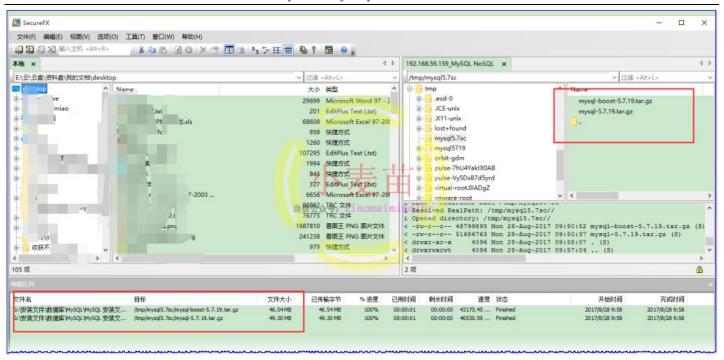
1.11.3 创建要安装的目录

```
[root@LHRDB ~] # df -h
                                Size Used Avail Use% Mounted on
Filesystem
                                   9.9G 4.6G 4.9G 49% /
/dev/mapper/vg rootlhr-Vol00
                                 2.0G 76K 2.0G 1% /dev/shm
tmpfs
                                 194M 35M 150M 19% /boot
/dev/sda1
/dev/mapper/vg rootlhr-Vol01
                                   3.0G 1.8G 1.1G 64% /tmp
/dev/mapper/vg_rootlhr-Vol03
                                   3.0G 69M 2.8G 3% /home
/dev/mapper/vg mysqlsoft-lv mysqlsoft 57 5.0G 2.7G 2.0G 58% /var/lib/mysql57
/dev/mapper/vg mysqlsoft-lv mysqlsoft 56 2.0G 1.4G 575M 70% /usr/local/mysql56
/dev/mapper/vg mysqlsoft-lv mysqlsoft 55 2.0G 848M 1.1G 45% /usr/local/mysql55
                                 331G 273G 58G 83% /mnt/hqfs
.host:/
                                            0 100% /media/RHEL 6.5 x86 64 Disc 1
/dev/sr0
                                 3.6G 3.6G
/dev/sr0
                                 3.6G 3.6G
                                             0 100% /media/lhr/cdrom
[root@LHRDB ~] # vgs
 VG #PV #LV #SN Attr VSize VFree
 vg mysqlsoft 1 3 0 wz--n- 10.00g 1020.00m
             2 4 0 wz--n- 19.80g 1.80g
 vg rootlhr
[root@LHRDB ~] # pvs
 PV VG
                   Fmt Attr PSize PFree
 /dev/sda2 vg_rootlhr lvm2 a-- 10.00g
 /dev/sda3 vg rootlhr lvm2 a-- 9.80g 1.80g
 /dev/sdb1 vg mysqlsoft lvm2 a-- 10.00g 1020.00m
 /dev/sdb10
                    lvm2 a-- 10.00g 10.00g
 /dev/sdb11
                    lvm2 a-- 9.99g 9.99g
 /dev/sdb2
                    lvm2 a-- 10.00g 10.00g
                                     10.00g
                     lvm2 a-- 10.00g
 /dev/sdb3
                    lvm2 a-- 10.00g 10.00g
 /dev/sdb5
 /dev/sdb6
                    lvm2 a-- 10.00g 10.00g
 /dev/sdb7
                    lvm2 a-- 10.00g 10.00g
 /dev/sdb8
                    lvm2 a-- 10.00g 10.00g
                    lvm2 a-- 10.00g 10.00g
 /dev/sdb9
[root@LHRDB ~]# vgextend vg mysqlsoft /dev/sdb2
 Volume group "vg_mysqlsoft" successfully extended
[root@LHRDB ~] # vgs
 vg mysqlsoft 2 3 0 wz--n- 19.99g 10.99g
 vg rootlhr 2 4 0 wz--n- 19.80g 1.80g
[root@LHRDB ~] # lvcreate -n lv mysqlsoft 57sc -L 10G vg mysqlsoft
 Logical volume "lv mysqlsoft 57sc" created
[root@LHRDB ~]# mkfs.ext4 /dev/vg mysqlsoft/lv mysqlsoft 57sc
mke2fs 1.41.12 (17-May-2010)
Filesystem label=
OS type: Linux
Block size=4096 (log=2)
Fragment size=4096 (log=2)
Stride=0 blocks, Stripe width=0 blocks
327680 inodes, 1310720 blocks
65536 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=1342177280
40 block groups
32768 blocks per group, 32768 fragments per group
8192 inodes per group
Superblock backups stored on blocks:
      32768, 98304, 163840, 229376, 294912, 819200, 884736
Writing inode tables: done
Creating journal (32768 blocks): done
Writing superblocks and filesystem accounting information: done
```

```
This filesystem will be automatically checked every 30 mounts or
180 days, whichever comes first. Use tune2fs -c or -i to override.
[root@LHRDB ~] # mkdir /usr/local/mysql57sc
[root@LHRDB ~]# chown mysql.mysql /usr/local/mysql57sc
[root@LHRDB ~]# mount /dev/vg mysqlsoft/lv mysqlsoft 57sc /usr/local/mysql57sc/
[root@LHRDB ~]# df -h
Filesystem
                                     Size Used Avail Use% Mounted on
/dev/mapper/vg rootlhr-Vol00
                                        9.9G 4.6G 4.8G 49% /
                                    2.0G 76K 2.0G 1% /dev/shm
tmpfs
/dev/sda1
                                     194M 35M 150M 19% /boot
/dev/mapper/vg rootlhr-Vol01
                                       3.0G 1.8G 1.1G 64% /tmp
/dev/mapper/vg rootlhr-Vol03
                                        3.0G 69M 2.8G 3% /home
/dev/mapper/vg mysqlsoft-lv mysqlsoft 57 5.0G 2.7G 2.0G 58% /var/lib/mysql57
/dev/mapper/vg mysqlsoft-lv mysqlsoft 56
                                         2.0G 1.4G 575M 70% /usr/local/mysql56
/dev/mapper/vg_mysqlsoft-lv_mysqlsoft_55 2.0G 848M 1.1G 45% /usr/local/mysql55
                                    331G 273G 58G 83% /mnt/hgfs
.host:/
/dev/sr0
                                     3.6G 3.6G 0 100% /media/RHEL 6.5 x86 64 Disc 1
/dev/sr0
                                     3.6G 3.6G
                                                  0 100% /media/lhr/cdrom
/dev/mapper/vg_mysqlsoft-lv_mysqlsoft_57sc 9.9G 138M 9.6G 1% /usr/local/mysql57sc
[root@LHRDB ~]# more /etc/fstab
# /etc/fstab
# Created by anaconda on Sat Jan 14 18:56:24 2017
# Accessible filesystems, by reference, are maintained under '/dev/disk'
# See man pages fstab(5), findfs(8), mount(8) and/or blkid(8) for more info
/dev/mapper/vg rootlhr-Vol00 /
                                                ext4
                                                       defaults
UUID=fccf51c1-2d2f-4152-baac-99ead8cfbc1a /boot
                                                                                  1 2
                                                             ext4
                                                                    defaults
/dev/mapper/vg_rootlhr-Vol01 /tmp
                                                                    1 2
                                                ext4
                                                       defaults
/dev/mapper/vg rootlhr-Vol02 swap
                                                swap defaults
                                                                     0 0
tmpfs
                    /dev/shm
                                        tmpfs defaults, size=2G
                                        devpts gid=5, mode=620 0 0
devpts
                    /dev/pts
sysfs
                    /sys
                                        sysfs defaults
                                                             0 0
                                        proc
proc
                    /proc
                                               defaults
/dev/vg rootlhr/Vol03 /home ext4 defaults
                                               0 0
/dev/vg mysqlsoft/lv mysqlsoft 57 /var/lib/mysql57 ext4 defaults 0 0
/dev/vg mysglsoft/lv mysglsoft 56 /usr/local/mysgl56 ext4 defaults 0 0
/dev/vg mysqlsoft/lv mysqlsoft 55 /usr/local/mysql55 ext4
                                                           defaults 0 0
/dev/sr0 /media/lhr/cdrom iso9660 defaults,ro,loop 0 0
/dev/vg mysqlsoft/lv mysqlsoft 57sc /usr/local/mysql57sc ext4 defaults 0 0
```

1.11.4 上传并解压

[root@LHRDB ~] # mkdir -p /tmp/mysql5.7sc



```
[root@LHRDB ~]# cd /tmp/mysql5.7sc
[root@LHRDB mysql5.7sc]# 11
total 98136
-rw-r--r 1 root root 51686763 Aug 28 09:50 mysgl-5.7.19.tar.gz
-rw-r--r-- 1 root root 48799895 Aug 28 09:50 mysql-boost-5.7.19.tar.gz
[root@LHRDB mysql5.7sc]# tar -zxf /tmp/mysql5.7sc/mysql-5.7.19.tar.gz -C /usr/local/mysql57sc/
[root@LHRDB mysql5.7sc]# tar -zxf /tmp/mysql5.7sc/mysql-boost-5.7.19.tar.gz -C /usr/local/mysql57sc/
[root@LHRDB mysql5.7sc]# 11
total 98140
drwxr-xr-x 36 7161 31415
                           4096 Jun 22 22:24 mysql-5.7.19
-rw-r--r- 1 root root 51686763 Aug 28 09:50 mysql-5.7.19.tar.qz
-rw-r--r-- 1 root root 48799895 Aug 28 09:50 mysql-boost-5.7.19.tar.gz
[root@LHRDB mysql5.7sc]# df -h
                                     Size Used Avail Use% Mounted on
Filesystem
/dev/mapper/vg rootlhr-Vol00
                                        9.9G 4.7G 4.8G 50% /
                                     2.0G 76K 2.0G 1% /dev/shm
tmpfs
                                           35M 150M 19% /boot
/dev/sda1
                                     194M
/dev/mapper/vg rootlhr-Vol01
                                        3.0G 1.6G 1.3G 56% /tmp
                                        3.0G 69M 2.8G
/dev/mapper/vg_rootlhr-Vol03
                                                         3% /home
/dev/mapper/vg mysqlsoft-lv mysqlsoft 57 5.0G 2.7G 2.0G 58% /var/lib/mysql57
/dev/mapper/vg mysglsoft-lv mysglsoft 56 2.0G 1.4G 575M 70% /usr/local/mysgl56
/dev/mapper/vg mysqlsoft-lv mysqlsoft 55
                                         2.0G 848M 1.1G 45% /usr/local/mysql55
                                     331G 273G
.host:/
                                                58G 83% /mnt/hgfs
/dev/sr0
                                     3.6G 3.6G
                                                   0 100% /media/RHEL 6.5 x86 64 Disc 1
                                                   0 100% /media/lhr/cdrom
/dev/sr0
                                     3.6G 3.6G
/dev/mapper/vg_mysqlsoft-lv_mysqlsoft_57sc 9.9G 683M 9.4G 7% /usr/local/mysql57sc
```

修改目录的权限:

```
[root@LHRDB local]# cd /usr/local/mysq157sc
[root@LHRDB mysq157sc]# mv mysq1-5.7.19 mysq157
[root@LHRDB mysq157sc]# mkdir ./mysq157/data
[root@LHRDB mysq157sc]# mkdir ./mysq157/log
[root@LHRDB mysq157sc]# chown -R mysq1.mysq1 .
```

1.11.5 安装编译环境所需要的包和一些依赖包

1.11.5.1 配置本地 YUM 源

```
mkdir -p /media/lhr/cdrom mount /dev/sr0 /media/lhr/cdrom/

#设置开机自动挂载系统镜像文件 vi /etc/fstab 添加以下内容 /dev/sr0 /media/lhr/cdrom iso9660 defaults,ro,loop 0 0 

cd /etc/yum.repos.d/ cp rhel-media.repo rhel-media.repo.bk vi /etc/yum.repos.d/rhel-media.repo [rhel-media] name=Red Hat Enterprise Linux 6.5 baseurl=file:///media/lhr/cdrom enabled=1 gpgcheck=1 gpgcheck=1 gpgkey=file:///media/lhr/cdrom/RPM-GPG-KEY-redhat-release
```

```
[root@LHRDB ~] # mkdir -p /media/lhr/cdrom
[root@LHRDB ~] # mount /dev/sr0 /media/lhr/cdrom/
mount: block device /dev/sr0 is write-protected, mounting read-only
[root@LHRDB ~] # cd /etc/yum.repos.d/
[root@LHRDB yum.repos.d] # cp rhel-media.repo rhel-media.repo.bk
[root@LHRDB yum.repos.d] # more /etc/yum.repos.d/rhel-media.repo
[rhel-media]
name=Red Hat Enterprise Linux 6.5
baseurl=file:///media/lhr/cdrom
enabled=1
gpgcheck=1
gpgcheck=1
gpgkey=file:///media/lhr/cdrom/RPM-GPG-KEY-redhat-release
```

1.11.5.2 安装依赖包

```
yum install -y cmake make gcc gcc-c++ ncurses-devel
```

```
Dependencies Resolved
______
Package
                             Arch
                                                          Version
Repository
                                Size
______
______
Installing:
                             x86 64
                                                          2.6.4-5.el6
cmake
rhel-media
                                5.1 M
Transaction Summary
_______
Install
        1 Package(s)
Total download size: 5.1 M
Installed size: 17 M
Downloading Packages:
warning: rpmts HdrFromFdno: Header V3 RSA/SHA256 Signature, key ID fd431d51: NOKEY
Retrieving key from file:///media/lhr/cdrom/RPM-GPG-KEY-redhat-release
Importing GPG key 0xFD431D51:
Userid: "Red Hat, Inc. (release key 2) <security@redhat.com>"
From : /media/lhr/cdrom/RPM-GPG-KEY-redhat-release
Importing GPG key 0x2FA658E0:
Userid: "Red Hat, Inc. (auxiliary key) <security@redhat.com>"
From : /media/lhr/cdrom/RPM-GPG-KEY-redhat-release
Running rpm check debug
Running Transaction Test
Transaction Test Succeeded
Running Transaction
Warning: RPMDB altered outside of yum.
 Installing: cmake-2.6.4-5.el6.x86 64
1/1
 Verifying : cmake-2.6.4-5.el6.x86 64
1/1
Installed:
 cmake.x86 64 0:2.6.4-5.el6
Complete!
```

注意: 这里的 cmake 最低需要 2.8.2 版本的,不然会报错,先接着往下做吧。

1.11.6 执行编译命令

1.11.6.1 升级 cmake 的版本

```
[root@LHRDB mysql-5.7.19]# cmake -version
cmake version 2.6-patch 4
[root@LHRDB mysql-5.7.19]# pwd
/tmp/mysql5.7sc/mysql-5.7.19
```

```
[root@LHRDB mysql-5.7.19]# 11
total 332
drwxr-xr-x 3 7161 31415 4096 Jun 22 22:24 boost
drwxr-xr-x 2 7161 31415 4096 Jun 22 22:24 BUILD
drwxr-xr-x 6 7161 31415 4096 Jun 22 22:24 client
drwxr-xr-x 4 7161 31415 4096 Jun 22 22:24 cmake
-rw-r--r 1 7161 31415 26727 Jun 22 22:13 CMakeLists.txt
drwxr-xr-x 3 7161 31415 4096 Jun 22 22:24 cmd-line-utils
-rw-r--r- 1 7161 31415 13832 Jun 22 22:13 config.h.cmake
-rw-r--r 1 7161 31415 33704 Jun 22 22:13 configure.cmake
-rw-r--r-- 1 7161 31415 17987 Jun 22 22:13 COPYING
drwxr-xr-x 2 7161 31415 4096 Jun 22 22:24 dbug
drwxr-xr-x 2 7161 31415 4096 Jun 22 22:24 Docs
-rw-r--r- 1 7161 31415 66241 Jun 22 22:13 Doxyfile-perfschema
drwxr-xr-x 6 7161 31415 4096 Jun 22 22:24 extra
drwxr-xr-x 5 7161 31415 4096 Jun 22 22:24 include
-rw-r--r-- 1 7161 31415 333 Jun 22 22:13 INSTALL
drwxr-xr-x 5 7161 31415 4096 Jun 22 22:24 libbinlogevents
drwxr-xr-x 3 7161 31415 4096 Jun 22 22:24 libbinlogstandalone
drwxr-xr-x 7 7161 31415 4096 Jun 22 22:24 libevent
drwxr-xr-x 4 7161 31415 4096 Jun 22 22:24 libmysql
drwxr-xr-x 3 7161 31415 4096 Jun 22 22:24 libmysqld
drwxr-xr-x 2 7161 31415 4096 Jun 22 22:24 libservices
drwxr-xr-x 2 7161 31415 4096 Jun 22 22:24 man
drwxr-xr-x 10 7161 31415 4096 Jun 22 22:24 mysql-test
drwxr-xr-x 2 7161 31415 4096 Jun 22 22:24 mysys
drwxr-xr-x 2 7161 31415 4096 Jun 22 22:24 mysys ssl
drwxr-xr-x 10 7161 31415 4096 Jun 22 22:24 packaging
drwxr-xr-x 18 7161 31415 4096 Jun 22 22:24 plugin
drwxr-xr-x 4 7161 31415 4096 Jun 22 22:24 rapid
-rw-r--r-- 1 7161 31415 2478 Jun 22 22:13 README
drwxr-xr-x 2 7161 31415 4096 Jun 22 22:24 regex
drwxr-xr-x 3 7161 31415 4096 Jun 22 22:24 scripts
drwxr-xr-x 7 7161 31415 20480 Jun 22 22:24 sql
drwxr-xr-x 2 7161 31415 4096 Jun 22 22:24 sql-common
drwxr-xr-x 14 7161 31415 4096 Jun 22 22:24 storage
drwxr-xr-x 2 7161 31415 4096 Jun 22 22:24 strings
drwxr-xr-x 4 7161 31415 4096 Jun 22 22:24 support-files
drwxr-xr-x 2 7161 31415 4096 Jun 22 22:24 testclients
drwxr-xr-x 5 7161 31415 4096 Jun 22 22:24 unittest
-rw-r--r-- 1 7161 31415 88 Jun 22 22:13 VERSION
drwxr-xr-x 3 7161 31415 4096 Jun 22 22:24 vio
drwxr-xr-x 2 7161 31415 4096 Jun 22 22:24 win
drwxr-xr-x 2 7161 31415 4096 Jun 22 22:24 zlib
[root@LHRDB mysql-5.7.19]# cmake \
> -DCMAKE INSTALL PREFIX=/usr/local/mysql57sc/mysql57 \
> -DMYSQL DATADIR=/usr/local/mysql57sc/mysql57/data \
> -DMYSQL USER=mysql \
> -DWITH INNOBASE STORAGE ENGINE=1
> -DWITH ARCHIVE STORAGE ENGINE=1
> -DWITH BLACKHOLE STORAGE ENGINE=1 \
> -DWITH PERFSCHEMA STORAGE ENGINE=1 \
> -DWITH READLINE=1 \
> -DDOWNLOAD BOOST=1 \
> -DWITH BOOST=/usr/local/mysql57sc/mysql57/boost/boost 1 59 0/
CMake Error at CMakeLists.txt:21 (CMAKE MINIMUM REQUIRED):
CMake 2.8.2 or higher is required. You are running version 2.6.4
-- Configuring incomplete, errors occurred!
```

cmake 每个参数的介绍参考: http://blog.itpub.net/26736162/viewspace-2144212/

下载高版本 cmake, http://www.cmake.org/cmake/resources/software.html, 解压缩 cmake-3.9.1.tar.gz, 解压后执行 "./bootstrap && make && make install", 如下:

```
[root@LHRDB ~] # cd /tmp/mysql5.7sc/
[root@LHRDB mysql5.7sc]# 11
total 105664
-rw-r--r 1 root root 7702497 Aug 28 10:20 cmake-3.9.1.tar.gz
drwxr-xr-x 37 7161 31415 4096 Aug 28 10:38 mysgl-5.7.19
-rw-r--r-- 1 root root 51686763 Aug 28 09:50 mysql-5.7.19.tar.gz
-rw-r--r-- 1 root root 48799895 Aug 28 09:50 mysql-boost-5.7.19.tar.gz
[root@LHRDB mysql5.7sc]# tar -zxf cmake-3.9.1.tar.gz
[root@LHRDB mysql5.7sc]# 11
total 105668
drwxr-xr-x 11 root root 4096 Aug 28 10:42 cmake-3.9.1
-rw-r--r- 1 root root 7702497 Aug 28 10:20 cmake-3.9.1.tar.gz
drwxr-xr-x 37 7161 31415 4096 Aug 28 10:38 mysql-5.7.19
-rw-r--r 1 root root 51686763 Aug 28 09:50 mysql-5.7.19.tar.gz
-rw-r--- 1 root root 48799895 Aug 28 09:50 mysql-boost-5.7.19.tar.gz
[root@LHRDB mysql5.7sc]# cd cmake-3.9.1
[root@LHRDB cmake-3.9.1] # 11
total 284
drwxr-xr-x 4 502 games 4096 Aug 10 21:47 Auxiliary
-rwxr-xr-x 1 502 games 48336 Aug 10 21:36 bootstrap
-rw-r--r- 1 502 games 9706 Aug 10 21:36 CMakeCPack.cmake
-rw-r--r- 1 502 games 12897 Aug 10 21:36 CMakeCPackOptions.cmake.in
-rw-r--r- 1 502 games 153 Aug 10 21:36 CMakeGraphVizOptions.cmake
-rw-r--r 1 502 games 31721 Aug 10 21:36 CMakeLists.txt
-rw-r--r- 1 502 games 4481 Aug 10 21:36 CMakeLogo.gif
-rw-r--r- 1 502 games 790 Aug 10 21:36 cmake uninstall.cmake.in
-rw-r--r- 1 502 games 3322 Aug 10 21:36 CompileFlags.cmake
-rwxr-xr-x 1 502 games
                        99 Aug 10 21:36 configure
-rw-r--r 1 502 games 1851 Aug 10 21:36 CONTRIBUTING.rst
-rw-r--r-- 1 502 games 4999 Aug 10 21:36 Copyright.txt
-rw-r--r 1 502 games 440 Aug 10 21:36 CTestConfig.cmake
-rw-r--r- 1 502 games 6213 Aug 10 21:36 CTestCustom.cmake.in
-rw-r--r 1 502 games 374 Aug 10 21:36 DartConfig.cmake
-rw-r--r- 1 502 games 28046 Aug 10 21:36 doxygen.config
drwxr-xr-x 18 502 games 4096 Aug 10 21:47 Help
drwxr-xr-x 2 502 games 4096 Aug 10 21:47 Licenses
drwxr-xr-x 12 502 games 20480 Aug 10 21:47 Modules
drwxr-xr-x 3 502 games 4096 Aug 10 21:47 Packaging
-rw-r--r- 1 502 games 3016 Aug 10 21:36 README.rst
drwxr-xr-x 11 502 games 36864 Aug 10 21:47 Source
drwxr-xr-x 4 502 games 4096 Aug 10 21:47 Templates
drwxr-xr-x 240 502 games 12288 Aug 10 21:47 Tests
drwxr-xr-x 21 502 games 4096 Aug 10 21:47 Utilities
[root@LHRDB cmake-3.9.1]#
[root@LHRDB cmake-3.9.1]# ./bootstrap && make && make install
CMake 3.9.1, Copyright 2000-2017 Kitware, Inc. and Contributors
Found GNU toolchain
C compiler on this system is: gcc -std=gnu99
C++ compiler on this system is: g++ -std=gnu++0x
Makefile processor on this system is: gmake
g++ is GNU compiler
g++ has setenv
g++ has unsetenv
q++ does not have environ in stdlib.h
g++ has stl wstring
g++ has <ext/stdio filebuf.h>
g++ -std=gnu++0x -I/tmp/mysql5.7sc/cmake-3.9.1/Bootstrap.cmk -I/tmp/mysql5.7sc/cmake-3.9.1/Source
```

```
-I/tmp/mysql5.7sc/cmake-3.9.1/Source/LexerParser -I/tmp/mysql5.7sc/cmake-3.9.1/Utilities -c
/tmp/mysq15.7sc/cmake-3.9.1/Source/cmAddCustomCommandCommand.cxx -o cmAddCustomCommandCommand.o
                   -I/tmp/mysq15.7sc/cmake-3.9.1/Bootstrap.cmk -I/tmp/mysq15.7sc/cmake-3.9.1/Source
g++ -std=gnu++0x
-I/tmp/mysql5.7sc/cmake-3.9.1/Source/LexerParser -I/tmp/mysql5.7sc/cmake-3.9.1/Utilities -c
/tmp/mysq15.7sc/cmake-3.9.1/Source/cmAddCustomTargetCommand.cxx -o cmAddCustomTargetCommand.o
。。。。。。。。。。。。 省略 。。。。。。。。
-- Installing: /usr/local/bin/cmake
-- Installing: /usr/local/bin/ctest
-- Installing: /usr/local/bin/cpack
-- Installing: /usr/local/share/cmake-3.9/include/cmCPluginAPI.h
-- Installing: /usr/local/share/cmake-3.9/editors/vim/indent
-- Installing: /usr/local/share/cmake-3.9/editors/vim/indent/cmake.vim
-- Installing: /usr/local/share/cmake-3.9/editors/vim/syntax
-- Installing: /usr/local/share/cmake-3.9/editors/vim/syntax/cmake.vim
-- Installing: /usr/local/share/cmake-3.9/editors/emacs/cmake-mode.el
-- Installing: /usr/local/share/aclocal/cmake.m4
-- Installing: /usr/local/share/cmake-3.9/completions/cmake
-- Installing: /usr/local/share/cmake-3.9/completions/cpack
-- Installing: /usr/local/share/cmake-3.9/completions/ctest
[root@LHRDB cmake-3.9.1] # which cmake
/usr/local/bin/cmake
[root@LHRDB cmake-3.9.1]# cmake -version
cmake version 3.9.1
```

 \mathcal{P}_{α}

重新开一个 shell 并继续编译:

-- CMAKE BUILD TYPE: RelWithDebInfo

```
[root@LHRDB mysql57]# cmake \
> -DCMAKE INSTALL PREFIX=/usr/local/mysq157sc/mysq157 \
> -DMYSQL DATADIR=/usr/local/mysql57sc/mysql57/data \
> -DMYSQL USER=mysql \
> -DWITH INNOBASE STORAGE ENGINE=1
> -DWITH ARCHIVE STORAGE ENGINE=1
> -DWITH BLACKHOLE STORAGE ENGINE=1 \
> -DWITH PERFSCHEMA STORAGE ENGINE=1 \
> -DWITH READLINE=1 \
> -DDOWNLOAD_BOOST=1 \
> -DWITH_BOOST=/usr/local/mysql57sc/mysql57/boost/boost 1 59 0/
CMake Deprecation Warning at CMakeLists.txt:26 (CMAKE POLICY):
 The OLD behavior for policy CMP0018 will be removed from a future version
 of CMake.
 The cmake-policies(7) manual explains that the OLD behaviors of all
 policies are deprecated and that a policy should be set to OLD only under
 specific short-term circumstances. Projects should be ported to the NEW
 behavior and not rely on setting a policy to OLD.
CMake Deprecation Warning at CMakeLists.txt:32 (CMAKE POLICY):
 The OLD behavior for policy CMP0022 will be removed from a future version
 of CMake.
。。。。。。。。省略部分。。。。。。。。
 The cmake-policies(7) manual explains that the OLD behaviors of all
 policies are deprecated and that a policy should be set to OLD only under
 specific short-term circumstances. Projects should be ported to the NEW
 behavior and not rely on setting a policy to OLD.
-- INSTALL mysqlclient.pc lib/pkgconfig
-- Skipping deb packaging on unsupported platform .
```

-- CMAKE C FLAGS: -Wall -Wextra -Wformat-security -Wvla -Wwrite-strings -Wdeclaration-after-statement

-- COMPILE_DEFINITIONS: _GNU_SOURCE;_FILE_OFFSET_BITS=64; HAVE_CONFIG_H; HAVE_LIBEVENT1

```
-- CMAKE C LINK FLAGS:
-- CMAKE CXX LINK FLAGS:
-- CMAKE C FLAGS RELWITHDEBINFO: -03 -g -fabi-version=2 -fno-omit-frame-pointer -fno-strict-aliasing
-DDBUG OFF
-- CMAKE CXX FLAGS RELWITHDEBINFO: -03 -g -fabi-version=2 -fno-omit-frame-pointer -fno-strict-aliasing
-DDBUG OFF
-- Configuring done
-- Generating done
-- Build files have been written to: /usr/local/mysq157sc/mysq157
```

成功。

1.11.6.2 编译安装

该过程最慢。。。。。虚拟机约 40 分钟。。。。

```
[root@LHRDB mysql57]# make && make install
Scanning dependencies of target abi check
[ 0%] Built target abi check
Scanning dependencies of target INFO SRC
[ 0%] Built target INFO SRC
Scanning dependencies of target INFO BIN
[ 0%] Built target INFO BIN
Scanning dependencies of target zlib
[ 0%] Building C object zlib/CMakeFiles/zlib.dir/adler32.c.o
[ 0%] Building C object zlib/CMakeFiles/zlib.dir/compress.c.o
[ 0%] Building C object zlib/CMakeFiles/zlib.dir/crc32.c.o
[ 0%] Building C object zlib/CMakeFiles/zlib.dir/deflate.c.o
[ 0%] Building C object zlib/CMakeFiles/zlib.dir/gzio.c.o
[ 0%] Building C object zlib/CMakeFiles/zlib.dir/infback.c.o
  0%] Building C object zlib/CMakeFiles/zlib.dir/inffast.c.o
[ 0%] Building C object zlib/CMakeFiles/zlib.dir/inflate.c.o
[ 0%] Building C object zlib/CMakeFiles/zlib.dir/inftrees.c.o
[ 0%] Building C object zlib/CMakeFiles/zlib.dir/trees.c.o
[ 0%] Building C object zlib/CMakeFiles/zlib.dir/uncompr.c.o
[ 0%] Building C object zlib/CMakeFiles/zlib.dir/zutil.c.o
。。。。。。。。。省略部分。。。。。。。。。。。。。
-- Installing: /usr/local/mysq157sc/mysq157/share/fill help tables.sql
-- Installing: /usr/local/mysq157sc/mysq157/share/mysq1 sys schema.sq1
-- Installing: /usr/local/mysq157sc/mysq157/share/mysq1 test data timezone.sq1
-- Installing: /usr/local/mysq157sc/mysq157/share/mysql security commands.sql
-- Installing: /usr/local/mysql57sc/mysql57/lib/pkqconfiq/mysqlclient.pc
-- Installing: /usr/local/mysql57sc/mysql57/bin/mysql config
-- Installing: /usr/local/mysql57sc/mysql57/bin/mysqldumpslow
-- Installing: /usr/local/mysql57sc/mysql57/bin/mysqld multi
-- Installing: /usr/local/mysql57sc/mysql57/bin/mysqld safe
-- Installing: /usr/local/mysq157sc/mysq157/share/aclocal/mysq1.m4
[root@LHRDB mysql57]#
[root@LHRDB mysql57]# df -h
                                     Size Used Avail Use% Mounted on
Filesystem
                                        9.9G 4.7G 4.8G 50% /
/dev/mapper/vg rootlhr-Vol00
tmpfs
                                     2.0G 72K 2.0G 1% /dev/shm
/dev/sda1
                                     194M 35M 150M 19% /boot
/dev/mapper/vg rootlhr-Vol01
                                        3.0G 1.6G 1.3G 56% /tmp
/dev/mapper/vg rootlhr-Vol03
                                        3.0G 69M 2.8G 3% /home
/dev/mapper/vg mysqlsoft-lv mysqlsoft 57 5.0G 2.7G 2.0G 58% /var/lib/mysql57
/dev/mapper/vg mysqlsoft-lv mysqlsoft 56 2.0G 1.4G 575M 70% /usr/local/mysql56
/dev/mapper/vg mysqlsoft-lv mysqlsoft 55 2.0G 848M 1.1G 45% /usr/local/mysql55
/dev/sr0
                                     3.6G 3.6G
                                                   0 100% /media/lhr/cdrom
/dev/mapper/vg_mysqlsoft-lv_mysqlsoft_57sc 9.9G 7.2G 2.2G 77% /usr/local/mysql57sc
                                     331G 273G 58G 83% /mnt/hgfs
.host:/
```

用了大概 7.2G, 太费空间了。最后的 make 和 make install 大概用了 40 分钟, 太费时间了。。。。。

1.11.7 初始化 MySQL

注意: MySQL 5.7.6之后的版本初始化数据库不再使用 mysql install db

```
[root@LHRDB mysq157]# mkdir log
[root@LHRDB mysq157]# chown mysql.mysql log
[root@LHRDB mysq157]# pwd
/usr/local/mysq157sc/mysq157
[root@LHRDB mysq157]# ./bin/mysqld --initialize --user=mysql --basedir=/usr/local/mysq157sc/mysq157
--datadir=/usr/local/mysq157sc/mysq157/data
2017-08-28T08:34:01.250285Z 0 [Warning] TIMESTAMP with implicit DEFAULT value is deprecated. Please use
--explicit_defaults_for_timestamp server option (see documentation for more details).
2017-08-28T08:34:02.675706Z 0 [Warning] InnoDB: New log files created, LSN=45790
2017-08-28T08:34:02.743783Z 0 [Warning] InnoDB: Creating foreign key constraint system tables.
2017-08-28T08:34:02.847128Z 0 [Warning] No existing UUID has been found, so we assume that this is the first time that this server has been started. Generating a new UUID: a572bb0e-8bcb-11e7-b92e-000c291823c2.
2017-08-28T08:34:02.848708Z 0 [Warning] Gtid table is not ready to be used. Table 'mysq1.gtid_executed' cannot be opened.
2017-08-28T08:34:02.851802Z 1 [Note] A temporary password is generated for root@localhost: N9eYPaqv4q!X
```

这里生成的临时密码为: N9eYPagv4g!X

1.11.8 配置/etc/my.cnf

修改文件/etc/my.cnf, 加入以下内容:

```
[mysqld573309]
basedir=/usr/local/mysql57sc/mysql57
datadir=/usr/local/mysql57sc/mysql57/data
socket=/usr/local/mysql57sc/mysql.sock
log-error=/usr/local/mysql57sc/mysql57/log/mysqld.log
user=mysql
port=3309
```

1.11.9 启动 MySQL

```
[root@LHRDB mysq15719]# echo '' > /usr/local/mysq157sc/mysq157/log/mysqld.log
[root@LHRDB mysq15719]# chown mysql.mysql /usr/local/mysq157sc/mysq157/log/mysqld.log
[root@LHRDB data]# mysqld_multi report
Reporting MySQL servers
MySQL server from group: mysqld57 is running
MySQL server from group: mysqld56 is running
MySQL server from group: mysqld55 is running
MySQL server from group: mysqld573309 is not running
[root@LHRDB data]# mysqld multi start 573309
[root@LHRDB data]# mysqld multi report
Reporting MySQL servers
MySQL server from group: mysqld57 is running
MySQL server from group: mysqld56 is running
MySQL server from group: mysqld55 is running
MySQL server from group: mysqld55 is running
```

```
MySQL server from group: mysqld573309 is running
[root@LHRDB data]# netstat -lntp | grep mysqld
        0 0.0.0.0:3308
                                         0.0.0.0:*
                                                                 LISTEN
                                                                           12932/mysqld
tcp
               0 :::3307
tcp
         0
                                         :::*
                                                                LISTEN
                                                                          12858/mysqld
        0 0 :::3309
                                         :::*
                                                                          29785/mysqld
                                                                LISTEN
tcp
               0 :::3306
                                                                          12880/mysqld
tcp
                                         :::*
                                                                LISTEN
```

1.11.10 登录 MySQL 并修改密码

```
[root@LHRDB data] # mysql -uroot --socket=/usr/local/mysql57sc/mysql57/mysql.sock -p
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 4
Server version: 5.7.19
Copyright (c) 2000, 2017, Oracle and/or its affiliates. All rights reserved.
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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> set password=password('lhr');
Query OK, 0 rows affected, 1 warning (0.00 sec)
mysql> select @@port;
+----+
| @@port |
+----+
| 3309 |
1 row in set (0.00 sec)
```

修改密码也可以用: update mysql.user set authentication_string=password('lhr') where user='root';

1.11.11 设置远程登录

```
4 rows in set (0.00 sec)
```

1.11.12 Windows 远程登录

在 Windows 下远程登录:

```
D:\Users\xiaomaimiao>mysql -uroot -plhr -h192.168.59.159 -P3309
Warning: Using a password on the command line interface can be insecure.
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 5
Server version: 5.7.19 Source distribution
Copyright (c) 2000, 2014, Oracle and/or its affiliates. All rights reserved.
Oracle is a registered trademark of Oracle Corporation and/or its
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> show databases;
+----+
| Database |
+----+
| information schema |
        | mysql
| performance_schema |
| sys
+----+
4 rows in set (0.00 sec)
mysql>
```

1.12 错误解决

1.12.1 ABORT: Can't find command 'my_print_defaults'.

```
[root@LHRDB ~] # service mysqld multi start
WARNING: my print defaults command not found.
Please make sure you have this command available and
in your path. The command is available from the latest
MySQL distribution.
WARNING: Log file disabled. Maybe directory or file isn't writable?
ABORT: Can't find command 'my print defaults'.
This command is available from the latest MySQL
distribution. Please make sure you have the command
in your PATH.
```

解决:

编辑文件: /etc/init.d/mysqld multi,添加: . /etc/profile,或者在文件

/etc/init.d/mysqld multi 中加入下面的变量:

MYSQL_HOME=/var/lib/mysql57/mysql5719 PATH=\$MYSQL HOME/bin:\$PATH

1.12.2 执行 cmake 编译时报错

```
CMake Error at cmake/boost.cmake:81 (MESSAGE):
You can download it with -DDOWNLOAD_BOOST=1 -DWITH_BOOST=<directory>
This CMake script will look for boost in <directory>. If it is not there,
it will download and unpack it (in that directory) for you.**
```

解决办法:

```
cmake -DDOWNLOAD_BOOST=1 -DWITH_BOOST=/root/mysql-5.7.19/boost/boost_1_59_0/
```

或者在执行 cmake 命令时加上 DOWNLOAD BOOST 和 WITH BOOST 参数。

1.13 参考文档

官方文档:

 $\verb|https://dev.mysql.com/doc/refman/5.7/en/checking-rpm-signature.html|$

https://dev.mysql.com/doc/refman/5.7/en/linux-installation-rpm.html

https://dev.mysql.com/doc/refman/5.7/en/installing-source-distribution.html

源码编译安装的更多内容: http://blog.itpub.net/26736162/viewspace-2144212/

rpm 的安装方式请参考:

http://blog.itpub.net/26736162/viewspace-1349705/

http://blog.itpub.net/26736162/viewspace-1349787/

第2章 实验中用到的 sqL 总结

os 路径设置:

```
vgcreate vg_mysqlsoft /dev/sdb1
lvcreate -n lv_mysqlsoft_57 -L 5G vg_mysqlsoft
mkfs.ext4 /dev/vg_mysqlsoft/lv_mysqlsoft_57
mkdir -p /tmp/mysql5719
mkdir -p /var/lib/mysql57
mount /dev/vg_mysqlsoft/lv_mysqlsoft_57 /var/lib/mysql57/
```

vi /etc/fstab

二进制安装过程:

```
md5sum mysql-5.7.19-linux-glibc2.12-x86 64.tar.gz
tar -zxvf mysql-5.7.19-linux-glibc2.12-x86 64.tar.gz -C /var/lib/mysql57/
mv mysql-5.7.19-linux-glibc2.12-x86 64 mysql5719
groupadd mysql
useradd -r -g mysql mysql
MySQL 5.6版本: ./scripts/mysql install db --user=mysql --basedir=/usr/local/mysql56/mysql5637
--datadir=/usr/local/mysq156/mysq15637/data
MySQL 5.7版本: ./bin/mysqld --initialize --user=mysql --basedir=/var/lib/mysql57/mysql5719
--datadir=/var/lib/mysql57/mysql5719/data
more /etc/my.cnf
cp mysql.server /etc/init.d/mysql57
chmod 755 /etc/init.d/mysql57
chkconfig --add mysq157
chkconfig mysql57 on
chkconfig --level 345 mysql57 on
mysqld_safe --user=mysql &
MYSQL HOME=/var/lib/mysql57/mysql5719
PATH=$PATH:$MYSQL HOME/bin
source /etc/profile
#MySQL 5.7 初始化时有默认密码, 5.6 无密码
mysql -uroot --socket=/usr/local/mysql56/mysql5637/mysql.sock -p
set password=password('lhr');
update mysql.user set authentication string=password('lhr') where user='root';
grant all privileges on *.* to root@'%' identified by 'lhr';
flush privileges;
```

源码安装:

```
tar -zxf /tmp/mysq15.7sc/mysq1-5.7.19.tar.gz -C /usr/local/mysq157sc/
tar -zxf /tmp/mysql5.7sc/mysql-boost-5.7.19.tar.gz -C /usr/local/mysql57sc/
mv mysql-5.7.19 mysql57
yum install -y cmake make gcc gcc-c++ ncurses-devel
#cmake 最低需要 2.8.2 版本的
cmake \
> -DCMAKE INSTALL PREFIX=/usr/local/mysql57sc/mysql57 \
> -DMYSQL DATADIR=/usr/local/mysql57sc/mysql57/data \
> -DMYSQL USER=mysql \
> -DWITH INNOBASE STORAGE ENGINE=1 \
> -DWITH_ARCHIVE_STORAGE_ENGINE=1 \
> -DWITH BLACKHOLE STORAGE ENGINE=1 \
> -DWITH PERFSCHEMA STORAGE ENGINE=1 \
> -DWITH READLINE=1 \
> -DDOWNLOAD BOOST=1 \
> -DWITH BOOST=/usr/local/mysql57sc/mysql57/boost/boost 1 59 0/
```

make && make install

查看 MySQL 的端口:

netstat -lntp | grep mysqld

About Me

- 本文作者: 小麦苗, 只专注于数据库的技术, 更注重技术的运用
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- 数据库笔试面试题库及解答: http://blog.itpub.net/26736162/viewspace-2134706/

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- 联系我请加 QQ 好友(646634621),注明添加缘由
- 于 2017-08-23 09:00 ~ 2017-08-28 22:00 在魔都完成 农历七月七日 七夕节 情人节 单身狗
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