

Centos7 Mysql5.7 源码安装

下载 Mysql5.7

下载地址：<https://downloads.mysql.com/archives/get/p/23/file/mysql-boost-5.7.34.tar.gz>

登陆进入服务器后输入下面命令，下载 mysql5.7 源码：

```
wget https://downloads.mysql.com/archives/get/p/23/file/mysql-boost-5.7.34.tar.gz
```

```
[root@localhost ~]# wget https://downloads.mysql.com/archives/get/p/23/file/mysql-boost-5.7.34.tar.gz
--2021-08-17 19:23:51-- https://downloads.mysql.com/archives/get/p/23/file/mysql-boost-5.7.34.tar.gz
正在解析主机 downloads.mysql.com (downloads.mysql.com)... 137.254.60.14
正在连接 downloads.mysql.com (downloads.mysql.com)|137.254.60.14|:443... 已连接。
已发出 HTTP 请求，正在等待回应... 302 Found
位置: https://cdn.mysql.com/archives/mysql-5.7/mysql-boost-5.7.34.tar.gz [跟随至新的 URL]
--2021-08-17 19:23:53-- https://cdn.mysql.com/archives/mysql-5.7/mysql-boost-5.7.34.tar.gz
正在解析主机 cdn.mysql.com (cdn.mysql.com)... 104.73.0.223
正在连接 cdn.mysql.com (cdn.mysql.com)|104.73.0.223|:443... 已连接。
已发出 HTTP 请求，正在等待回应... 200 OK
长度: 52891142 (50M) [application/x-tar-gz]
正在保存至: "mysql-boost-5.7.34.tar.gz"

100%[=====>] 52,891,142 235KB/s 用时 2m 48s

2021-08-17 19:26:43 (307 KB/s) - 已保存 "mysql-boost-5.7.34.tar.gz" [52891142/52891142]
```

安装 CMake

编译 Mysql5.7 需要用到 CMake，没有 CMake 的先下载安装，官网 <https://cmake.org/download/>，输入：

```
wget https://github.com/Kitware/CMake/releases/download/v3.21.1/cmake-3.21.1.tar.gz
```

```
[root@localhost ~]# wget https://github.com/Kitware/CMake/releases/download/v3.21.1/cmake-3.21.1.tar.gz
--2021-08-17 18:09:25-- https://github.com/Kitware/CMake/releases/download/v3.21.1/cmake-3.21.1.tar.gz
正在解析主机 github.com (github.com)... 13.250.177.223
正在连接 github.com (github.com)[13.250.177.223]:443... 已连接。
已发出 HTTP 请求, 正在等待回应... 302 Found
位置: https://github-releases.githubusercontent.com/537699/cfdae2f4-a3d8-4e14-b99a-00129e533d54?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIAIWNJYAX4CSVEH53A%2F20210817%2Fus-east-1%2Fs3%2Faws4_request&X-Amz-Date=20210817T020923Z&X-Amz-Expires=300&X-Amz-Signature=10ce6123cee3601ba0a41aad787f8a4cc4b315ee256caebfafefb883d21534fe&X-Amz-SignedHeaders=host&actor_id=0&key_id=0&repo_id=537699&response-content-disposition=attachment%3B%20filename%3Dcmake-3.21.1.tar.gz&response-content-type=application%2Foctet-stream [跟随至新的 URL]
--2021-08-17 18:09:26-- https://github-releases.githubusercontent.com/537699/cfdae2f4-a3d8-4e14-b99a-00129e533d54?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIAIWNJYAX4CSVEH53A%2F20210817%2Fus-east-1%2Fs3%2Faws4_request&X-Amz-Date=20210817T020923Z&X-Amz-Expires=300&X-Amz-Signature=10ce6123cee3601ba0a41aad787f8a4cc4b315ee256caebfafefb883d21534fe&X-Amz-SignedHeaders=host&actor_id=0&key_id=0&repo_id=537699&response-content-disposition=attachment%3B%20filename%3Dcmake-3.21.1.tar.gz&response-content-type=application%2Foctet-stream
正在解析主机 github-releases.githubusercontent.com (github-releases.githubusercontent.com)... 185.199.108.154, 185.199.109.154, 185.199.111.154, ...
正在连接 github-releases.githubusercontent.com (github-releases.githubusercontent.com)[185.199.108.154]:443... 已连接。
已发出 HTTP 请求, 正在等待回应... 200 OK
长度: 9629567 (9.2M) [application/octet-stream]
正在保存至: "cmake-3.21.1.tar.gz"

11% [==> ] 1,153,610 125KB/s 剩余 49s |
```

下载好后, 解压 tar -zxvf cmake-3.21.1.tar.gz

```
[root@localhost ~]# tar -zxvf cmake-3.21.1.tar.gz
```

```
[root@localhost ~]# pwd
/root
[root@localhost ~]# ls
anaconda-ks.cfg  cmake-3.21.1.tar.gz  mysql-5.7.34-linux-glibc2.12-i686.tar.gz
[root@localhost ~]# tar -zxvf cmake-3.21.1.tar.gz |
```

进入 cmake-3.21.1 目录, 配置:

```
[root@localhost ~]# cd cmake-3.21.1
```

```
[root@localhost cmake-3.21.1]# ./configure
```

```
[root@localhost ~]# ls
anaconda-ks.cfg  cmake-3.21.1.tar.gz
cmake-3.21.1     mysql-5.7.34-linux-glibc2.12-i686.tar.gz
[root@localhost ~]# cd cmake-3.21.1
[root@localhost cmake-3.21.1]# ./configure |
```

下面提示少了依赖, 我们先安装对应依赖

```
[root@localhost cmake-3.21.1]# ./configure
-----
CMake 3.21.1, Copyright 2000-2021 Kitware, Inc. and Contributors
-----
Error when bootstrapping CMake:
Cannot find appropriate C compiler on this system.
Please specify one using environment variable CC.
See cmake_bootstrap.log for compilers attempted.

-----
Log of errors: /root/cmake-3.21.1/Bootstrap.cmk/cmake_bootstrap.log
-----
```

安装依赖 gcc gcc-c++

```
[root@localhost cmake-3.21.1]# yum install gcc gcc-c++
```

```
已安装:
 gcc.x86_64 0:4.8.5-44.el7          gcc-c++.x86_64 0:4.8.5-44.el7

作为依赖被安装:
 cpp.x86_64 0:4.8.5-44.el7
 glibc-devel.x86_64 0:2.17-324.el7_9
 glibc-headers.x86_64 0:2.17-324.el7_9
 kernel-headers.x86_64 0:3.10.0-1160.36.2.el7
 libmpc.x86_64 0:1.0.1-3.el7
 libstdc++.devel.x86_64 0:4.8.5-44.el7
 mpfr.x86_64 0:3.1.1-4.el7

作为依赖被升级:
 glibc.x86_64 0:2.17-324.el7_9      glibc-common.x86_64 0:2.17-324.el7_9
 libgcc.x86_64 0:4.8.5-44.el7      libgomp.x86_64 0:4.8.5-44.el7
 libstdc++.x86_64 0:4.8.5-44.el7

完毕!
```

安装好依赖后，继续编译：

```
[root@localhost cmake-3.21.1]# ./configure
```

配置后，又提示缺少 OpenSSL，我们继续安装 OpenSSL 依赖

```
-- Looking for gethostname
-- Looking for gethostname - found
-- Could NOT find OpenSSL, try to set the path to OpenSSL root folder in the system variable OPENSSL_ROOT_DIR (missing: OPENSSL_CRYPTO_LIBRARY OPENSSL_INCLUDE_DIR)
CMake Error at Utilities/cmcurl/CMakeLists.txt:525 (message):
  Could not find OpenSSL.  Install an OpenSSL development package or
  configure CMake with -DCMAKE_USE_OPENSSL=OFF to build without OpenSSL.
```

安装 openssl openssl-devel：

```
[root@localhost cmake-3.21.1]# yum install openssl openssl-devel
```

```
更新完毕：  
openssl.x86_64 1:1.0.2k-21.el7_9
```

安装完毕后继续 configure

```
[root@localhost cmake-3.21.1]# ./configure
```

```
-- Performing Test run_inlines_hidden_test - Success  
-- Configuring done  
-- Generating done  
-- Build files have been written to: /root/cmake-3.21.1  
-----  
CMake has bootstrapped. Now run gmake.  
[root@localhost cmake-3.21.1]# |
```

没有报错之后，安装 make && make install

```
[root@localhost cmake-3.21.1]# make && make install
```

没有发现报错，CMake 就安装好了

```
Installing: /usr/local/share/vim/vimfiles/syntax  
-- Installing: /usr/local/share/vim/vimfiles/syntax/cmake.vim  
-- Installing: /usr/local/share/emacs/site-lisp/cmake-mode.el  
-- Installing: /usr/local/share/aclocal/cmake.m4  
-- Installing: /usr/local/share/bash-completion/completions/cmake  
-- Installing: /usr/local/share/bash-completion/completions/cpack  
-- Installing: /usr/local/share/bash-completion/completions/ctest  
[root@localhost cmake-3.21.1]# |
```

安装 Mysql5.7

先解压源码包

```
[root@localhost ~]# tar -zxvf mysql-boost-5.7.34.tar.gz
```

```
mysql-5.7.34/boost/boost_1_59_0/boost/wave.hpp
mysql-5.7.34/boost/boost_1_59_0/boost/weak_ptr.hpp
[root@localhost ~]# cd mysql-
mysql-5.7.34/          mysql-boost-5.7.34.tar.gz
[root@localhost ~]# cd mysql-5.7.34/
mysql-5.7.34-linux-glibc2.12-i686/support-files/magic
mysql-5.7.34-linux-glibc2.12-i686/support-files/mysql.s
mysql-5.7.34-linux-glibc2.12-i686/docs/INFO_BIN
mysql-5.7.34-linux-glibc2.12-i686/docs/INFO_SRC
[root@localhost ~]#
```

进入 mysql-5.7.34 目录

```
[root@localhost ~]# cd mysql-5.7.34/
```

开始 CMake 配置，先新建 mysql 目录和运行目录：

```
[root@localhost mysql-5.7.34]# mkdir /usr/local/mysql
```

```
[root@localhost mysql-5.7.34]# mkdir /usr/local/mysql/data
```

```
[root@localhost boost]# mkdir /var/run/mysqld
```

新建 mysql 用户和 mysql 用户组：

```
[root@localhost mysql-5.7.34]# groupadd mysql
```

```
[root@localhost mysql-5.7.34]# useradd -M -g mysql -s /sbin/nologin/ mysql
```

修改目录所有权限给 mysql 用户和用户组，-P 参数是递归下面的所有子目录

```
[root@localhost mysql-5.7.34]# chown -P mysql:mysql /usr/local/mysql
```

开始 Cmake 编译 Mysql

```
[root@localhost mysql-5.7.34]# cmake . -DWITH_BOOST=/root/mysql-5.7.34/boost/boost_1_59_0 \
```

```
-DCMAKE_INSTALL_PREFIX=/usr/local/mysql \
```

```
-DMYSQL_DATADIR=/usr/local/mysql/data \
```

```
-DDEFAULT_CHARSET=utf8mb4 \
```

```
-DDEFAULT_COLLATION=utf8mb4_general_ci \
```

```
-DEXTRA_CHARSETS=all \
```

```
-DENABLED_LOCAL_INFILE=1 \
```

```
-DMYSQL_USER=mysql \
```

```
-DMYSQL_TCP_PORT=3306
```

下面编译报错了，提示 需要安装 **ncurses-devel** 这个库

CMake Error at cmake/readline.cmake:71 (MESSAGE):

Curses library not found. Please install appropriate package,

remove CMakeCache.txt and rerun cmake. On Debian/Ubuntu, package name is libncurses5-dev, on Redhat and derivatives it is ncurses-devel.

Call Stack (most recent call first):

cmake/readline.cmake:105 (FIND_CURSES)

cmake/readline.cmake:198 (MYSQL_USE_BUNDLED_EDITLINE)

CMakelists.txt:556 (MYSQL_CHECK_EDITLINE)

安装报错的依赖

```
[root@localhost mysql-5.7.34]# yum install ncurses-devel
```

```
安装大小: 2.1 M
Is this ok [y/d/N]: y
Downloading packages:
ncurses-devel-5.9-14.20130511.el7_4.x86_64.rpm | 712 kB 00:00:00
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
 正在安装      : ncurses-devel-5.9-14.20130511.el7_4.x86_64      1/1
 验证中        : ncurses-devel-5.9-14.20130511.el7_4.x86_64      1/1

已安装:
ncurses-devel.x86_64 0:5.9-14.20130511.el7_4

完毕!
```

安装完毕后，继续 cmake 编译就用上面那个编译命令；

```
-- CMAKE_BUILD_TYPE: RelWithDebInfo
-- COMPILE_DEFINITIONS: _GNU_SOURCE; FILE_OFFSET_BITS=64;HAVE_CONFIG_H
-- CMAKE_C_FLAGS: -fPIC -fabi-version=2 -fno-omit-frame-pointer -fno-strict-aliasing -Wall -Wextra -Wformat-security -Wvla -Wwrite-strings -Wdeclaration-after-statement
-- CMAKE_CXX_FLAGS: -fPIC -fabi-version=2 -fno-omit-frame-pointer -fno-strict-aliasing -Wall -Wextra -Wformat-security -Wvla -Woverloaded-virtual -Wno-unused-parameter
-- CMAKE_CXX_FLAGS_DEBUG: -DENABLED_DEBUG_SYNC -DSAFE_MUTEX -g
-- CMAKE_CXX_FLAGS_RELWITHDEBINFO: -ffunction-sections -fdata-sections -O3 -g -DNDEBUG
-- CMAKE_CXX_FLAGS_RELEASE: -ffunction-sections -fdata-sections -O3 -DNDEBUG
-- CMAKE_CXX_FLAGS_MINSIZEREL: -ffunction-sections -fdata-sections -Os -DNDEBUG
-- CMAKE_C_LINK_FLAGS:
-- CMAKE_CXX_LINK_FLAGS:
-- CMAKE_EXE_LINKER_FLAGS
-- CMAKE_MODULE_LINKER_FLAGS
-- CMAKE_SHARED_LINKER_FLAGS
-- Configuring done
-- Generating done
-- Build files have been written to: /root/mysql-5.7.34
```

上面的编译过程中并没有报错，可以 make && make install 了

```
[root@localhost mysql-5.7.34]# make && make install
```



```
[ 37%] Built target myisammrg_embedded
Consolidate compiler generated dependencies of target myisammrg
[ 38%] Built target myisammrg
Consolidate compiler generated dependencies of target partition
[ 38%] Built target partition
Consolidate compiler generated dependencies of target partition_embedded
[ 38%] Built target partition_embedded
Consolidate compiler generated dependencies of target perfschema
[ 43%] Built target perfschema
Consolidate compiler generated dependencies of target gen_lex_hash
[ 43%] Built target gen_lex_hash
```

出现上面那个的页面就是正在安装中了，等待那么几十分钟，配置好的更快

```
-- Up-to-date: /usr/local/mysql/mysql-test/mtr
-- Up-to-date: /usr/local/mysql/mysql-test/mysql-test-run
-- Installing: /usr/local/mysql/mysql-test/lib/My/SafeProcess/my_safe_process
-- Up-to-date: /usr/local/mysql/mysql-test/lib/My/SafeProcess/my_safe_process
-- Installing: /usr/local/mysql/mysql-test/lib/My/SafeProcess/Base.pm
-- Installing: /usr/local/mysql/support-files/mysqld_multi.server
-- Installing: /usr/local/mysql/support-files/mysql-log-rotate
-- Installing: /usr/local/mysql/support-files/magic
-- Installing: /usr/local/mysql/share/aclocal/mysql.m4
-- Installing: /usr/local/mysql/support-files/mysql.server
[root@localhost mysql-5.7.34]#
```

这样就安装好了。

初始化数据库

进入到安装好的 mysql 目录下面：

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

```
[root@localhost mysql]# pwd
/usr/local/mysql
[root@localhost mysql]# ls
bin data docs include lib LICENSE man mysql-test README README-test share support-files
[root@localhost mysql]#
```

初始化 mysqld：

```
[root@localhost mysql]# bin/mysqld --initialize --user=mysql
```

```
[root@localhost mysql]# bin/mysqld --initialize --user=mysql
2021-08-30T06:12:23.130281Z 0 [Warning] TIMESTAMP with implicit DEFAULT value is deprecated. Please use
--explicit_defaults_for_timestamp server option (see documentation for more details).
2021-08-30T06:12:23.392678Z 0 [Warning] InnoDB: New log files created, LSN=45790
2021-08-30T06:12:23.474283Z 0 [Warning] InnoDB: Creating foreign key constraint system tables.
2021-08-30T06:12:23.535413Z 0 [Warning] No existing UUID has been found, so we assume that this is the f
irst time that this server has been started. Generating a new UUID: 3dceefa1-0959-11ec-bcf4-000c2953f22b
.
2021-08-30T06:12:23.536276Z 0 [Warning] Gtid table is not ready to be used. Table 'mysql.gtid_executed'
cannot be opened.
2021-08-30T06:12:23.728712Z 0 [Warning] CA certificate ca.pem is self signed.
2021-08-30T06:12:23.824988Z 1 [Note] A temporary password is generated for root@localhost: FhF?08oPir<u
[root@localhost mysql]#
```

初始化完成的时候会提示生成了一个临时的 Mysql root 密码

启动 Mysql 服务

```
[root@localhost mysql]# bin/mysqld_safe --user=mysql &
```

这里启动时报了一个错，**mysqld_safe 错误：日志错误设置为 "/var/log/mariadb/mariadb.log"，但是文件不存在。为用户 "mysql" 创建可写。**

```
[root@localhost mysql]# bin/mysqld_safe --user=mysql &
[1] 56483
[root@localhost mysql]# 2021-08-30T06:14:32.022598Z mysqld_safe error: log-error set to '/var/log/mariadb/mariadb.log', however file don't exists. Create writable for user 'mysql'.
```

下面我们新建这个文件，并且把所有权设置为 Mysql

首页新建一个目录

```
[root@localhost log]# mkdir -p /var/log/mariadb/
```

新建报错的日志文件

```
[root@localhost log]# touch /var/log/mariadb/mariadb.log
```

把目录的所有权更改为 Mysql 用户

```
[root@localhost log]# chown -R mysql:mysql /var/log/mariadb/
```

创建 mysql 运行的 pid 目录

```
[root@localhost mysql]# mkdir /var/run/mariadb/
```

更改所有权限为 mysql

```
[root@localhost mysql]# chown mysql:mysql /var/run/mariadb/
```

再启动 mysql 服务

```
[root@localhost mysql]# bin/mysqld_safe --user=mysql &
```

```
[root@localhost mysql]# bin/mysqld_safe --user=mysql &
[1] 56795
[root@localhost mysql]# 2021-08-30T06:25:37.016991Z mysqld_safe Logging to '/var/log/mariadb/mariadb.log'
.
2021-08-30T06:25:37.046628Z mysqld_safe Starting mysqld daemon with databases from /var/lib/mysql
```

启动后发现没有报错了。查询服务是否启用

```
[root@localhost mysql]# ps aux|grep mysql
```

```
[root@localhost mysql]# ps aux|grep mysql
root      56795  0.0  0.1 113412  1624 pts/1    S   14:25   0:00 /bin/sh bin/mysqld_safe --user=mysql
mysql     56930  0.2 16.8 1141520 169148 pts/1    Sl  14:25   0:00 /usr/local/mysql/bin/mysqld --basedir=/usr/local/mysql --datadir=/var/lib/mysql --plugin-dir=/usr/local/mysql/lib/plugin --user=mysql --log-error=/var/log/mariadb/mariadb.log --pid-file=/var/run/mariadb/mariadb.pid --socket=/var/lib/mysql/mysql.sock
root      56980  0.0  0.0 112824   984 pts/1    R+  14:27   0:00 grep --color=auto mysql
```

可以看到，mysql 服务已经启动，在查看 3306 端口是否也占用：


```
[root@localhost bin]# netstat -antp
Active Internet connections (servers and established)
Proto Recv-Q Send-Q Local Address           Foreign Address         State       PID/Program name
tcp        0      0 127.0.0.1:25           0.0.0.0:*               LISTEN      1223/master
tcp        0      0 0.0.0.0:22             0.0.0.0:*               LISTEN      994/sshd
tcp        0      0 192.168.254.129:22    192.168.254.1:6663     ESTABLISHED 38363/sshd: root@pt
tcp        0      0 192.168.254.129:22    192.168.254.1:14616    ESTABLISHED 36626/sshd: root@pt
tcp6       0      0 :::1:25                :::*                    LISTEN      1223/master
tcp6       0      0 :::3306                 :::*                    LISTEN      56930/mysqld
tcp6       0      0 :::22                  :::*                    LISTEN      994/sshd
[root@localhost bin]#
```

这时 mysql 服务就启动完毕

使用客户端链接服务器看看是否正常

```
[root@localhost mysql]# bin/mysql -uroot -p -h 127.0.0.1
```

```
[root@localhost mysql]# bin/mysql -uroot -p -h 127.0.0.1
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 2
Server version: 5.7.34 Source distribution

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

段错误

输入密码后，发现链接错误 段错误 (英文 Segmentation fault)

百度解决一下，说是需要修改一个源码，大约 838 行的函数开始：

```
[root@localhost mysql-5.7.34]# vim extra/libedit/libedit-20191231-3.1/src/terminal.c
```

```
libedit_private int
terminal_set(EditLine *el, const char *term)
{
    int i;
    //下面这行需要注释
    //char buf[TC_BUFSIZE];
    char *area;
    const struct termcapstr *t;
    sigset_t oset, nset;
    int lins, cols;
    (void) sigemptyset(&nset);
```

```
(void) sigaddset(&nset, SIGWINCH);  
(void) sigprocmask(SIG_BLOCK, &nset, &oset);  
//下面这行需要更改  
//area = buf;  
area = NULL;
```

centos7 开机自启动 mysql 服务

复制服务脚本

```
[root@localhost mysql-5.7.34]# cp /usr/local/mysql/support-files/mysql.server /etc/init.d/mysqld
```

添加此服务到系统服务

```
[root@localhost mysql-5.7.34]# chkconfig --add mysqld
```

添加服务后，就可以使用 systemctl 命令进行管理了

启动服务

```
[root@localhost mysql-5.7.34]# systemctl start mysqld
```

设置服务为开机自启动

```
[root@localhost mysql-5.7.34]# systemctl enable mysqld
```

查看服务运行状态

```
[root@localhost mysql-5.7.34]# systemctl status mysqld
```