# Linux系统安装MySQL

## docker 安装Linux系统

※Windows系统ping不通docker容器　Linux可以

```
用docker启动容器的一系列命令 【参考】
docker pull [OPTIONS] NAME[:TAG|@DIGEST]
docker pull centos:centos7

docker images
docker run [OPTIONS] IMAGE [COMMAND] [ARG...]
docker run -it -d --name centos7 centos:centos7

docker ps
docker exec [OPTIONS] CONTAINER COMMAND [ARG..]
docker exec -it centos7 /bin/bash

用docker启动centos7 【实操】
docker pull centos:centos7
docker run -d --privileged [Image Id] /sbin/init    这段命令是为了使systemctl有效
docker exec -it [Container Id] /bin/bash
```

## Windows11 安装Linux系统

```
事前安装好wsl  -->  Windows Subsystem for Linux
命令行开启/关闭hyper-v
bcdedit /set hypervisorlaunchtype auto/off

「Failed to get D-Bus connection: Operation not permitted」发生时
$ mv /usr/bin/systemctl /usr/bin/systemctl.old
$ curl https://raw.githubusercontent.com/gdraheim/docker-systemctl-replacement/master/files/docker/systemctl.py > /usr/bin/systemctl
$ chmod +x /usr/bin/systemctl
```

## Linux系统 安装MySQL

```
wget https://downloads.mysql.com/archives/get/p/23/file/mysql-8.0.26-1.el7.x86_64.rpm-bundle.tar
mkdir mysql
tar -xvf mysql-8.0.26-1.el7.x86_64.rpm-bundle.tar -C mysql
cd mysql
rpm -ivh mysql-community-common-8.0.26-1.el7.x86_64.rpm
rpm -ivh mysql-community-client-plugins-8.0.26-1.el7.x86_64.rpm
rpm -ivh mysql-community-libs-8.0.26-1.el7.x86_64.rpm
rpm -ivh mysql-community-libs-compat-8.0.26-1.el7.x86_64.rpm
rpm -ivh mysql-community-devel-8.0.26-1.el7.x86_64.rpm          依赖包yum install openssl-devel -y
rpm -ivh mysql-community-client-8.0.26-1.el7.x86_64.rpm
rpm -ivh mysql-community-server-8.0.26-1.el7.x86_64.rpm         依赖包yum install libaio -y
                                                                yum install libnuma* -y
                                                                yum install net-tools -y
                                                                yum install -y perl-Module-Install.noarch

systemctl start mysqld
systemctl restart mysqld
systemctl stop mysqld

grep 'temporary password' /var/log/mysqld.log  获取临时生成的密码
mysql -u root -p
修改密码报错时执行以下两条sql，对密码安全有要求可以不更改
ERROR 1819 (HY000): Your password does not satisfy the current policy requirements
设置的密码不符合默认的策略
set global validate_password.policy = 0;
set global validate_password.length = 4;  更改密码的限制策略

ALTER USER 'root'@'localhost' IDENTIFIED BY '1234'  修改密码

创建用户用于外部访问
create user 'root'@'%' IDENTIFIED WITH mysql_native_password BY '1234';
设置权限
grant all on *.* to 'root'@'%';
```

## MySQL启动时发生错误解决方法

```
ERROR 2002 (HY000): Can't connect to local MySQL server through socket '/var/lib/mysql/mysql.sock' (111)

systemctl status mysqld
```

```
mysqld.service - MySQL Server
    Loaded: loaded (/usr/lib/systemd/system/mysqld.service, enabled)
    Active: failed (failed)
cat /var/log/mysqld.log  参看错误日志
[ERROR] [MY-011300] [Server] Plugin mysqlx reported: 'Setup of socket: '/var/run/mysqld/mysqlx.sock' failed, can't create lock file
/var/run/mysqld/mysqlx.sock.lock'  google搜索解决方案

以下指令解决了上述问题
mkdir /var/run/mysqld
chown mysql:mysql /var/run/mysqld

系统退出时/var/run/mysqld文件夹被清空的解决方法
echo "d /var/run/mysqld 0755 mysql mysql -" > /usr/lib/tmpfiles.d/mysql.conf
```

```
mysql5.7安装后出现无法启动，建立/var/run/mysqld 并赋权mysql用户解决了启动的问题，但是重启系统后又出现无法启动的问题，导致/var/run/mysqld 目录每次重启后都需要手动去创建并赋权mysql用户才能起到mysql，可以说，这是mysql5.7的一个小BUG，经过探索实践，现给出终极解决方案：
首先申明，修改my.cnf没有用。
之所以/var/run/mysqld 目录每次重启后都需要手动去创建，是因为/var/run/目录下建立文件夹是在内存中，故每次重启后内存被清空导致/var/run/mysqld 也被清除，从而导致无法启动mysql。
vim /etc/init.d/mysqld
找到下面字段
get_mysql_option mysqld datadir "/var/lib/mysql"
datadir="$result"
get_mysql_option mysqld socket "$datadir/mysql.sock"
socketfile="$result"
get_mysql_option mysqld_safe log-error "/var/log/mysqld.log"
errlogfile="$result"
get_mysql_option mysqld_safe pid-file "/var/run/mysqld/mysqld.pid"
mypidfile="$result"
修改为
get_mysql_option mysqld datadir "/var/lib/mysql"
datadir="$result"
get_mysql_option mysqld socket "$datadir/mysql.sock"
socketfile="$result"
get_mysql_option mysqld_safe log-error "/var/log/mysqld.log"
errlogfile="$result"
get_mysql_option mysqld_safe pid-file "/var/lib/mysql/mysqld.pid"
mypidfile="$result"
保存后退出，执行下面命令：
systemctl daemon-reload   //重构进程
service mysqld start    //启动mysql
chkconfig mysqld on    //加入随系统启动启动
```