

Linux 的软件安装

一、JDK 安装

注意：rpm 与软件相关命令相当于 window 下的软件助手管理软件

步骤：

- (1) 查看当前 Linux 系统是否已经安装 java

输入 rpm -qa | grep java

```
java-1.6.0-openjdk-1.6.0.35-1.13.7.1.el6_6.i686
tzdata-java-2015e-1.el6.noarch
java-1.7.0-openjdk-1.7.0.79-2.5.5.4.el6.i686
```

- (2) 卸载两个 openJDK

输入 rpm -e --nodeps 要卸载的软件

```
[root@itheima23 ~]# rpm -e --nodeps java-1.7.0-openjdk-1.7.0.79-2.5.5.4.el6.i686
[root@itheima23 ~]# rpm -e --nodeps java-1.6.0-openjdk-1.6.0.35-1.13.7.1.el6_6.i686
```

- (3) 用 WinSCP 上传 JDK 到 Linux

- (4) 解压 JDK 到 /usr/local 下 tar -xvf jdk-8u144-linux-x64.tar.gz -C /usr/local

- (5) 配置 JDK 环境变量，打开 /etc/profile 配置文件，将下面配置拷贝进去

```
#set java environment
JAVA_HOME=/usr/local/jdk1.8.0_144
CLASSPATH=.:$JAVA_HOME/lib/tools.jar
PATH=$JAVA_HOME/bin:$PATH
export JAVA_HOME CLASSPATH PATH
```

- (6) 重新加载 /etc/profile 配置文件 source /etc/profile

二、MySQL 安装

Linux 下彻底卸载 MySQL

1、停止 MySQL 服务

systemctl stop mysqld

2、查看当前安装 MySQL 情况

rpm -qa | grep -i mysql

```
[root@master ~]# rpm -qa|grep -i mysql
mysql-community-common-5.7.19-1.el7.x86_64
mysql-community-client-5.7.19-1.el7.x86_64
mysql57-community-release-el7-11.noarch
mysql-community-libs-5.7.19-1.el7.x86_64
mysql-community-server-5.7.19-1.el7.x86_64
```

3、按顺序卸载以下内容

```
rpm -ev mysql-community-server-5.7.19-1.el7.x86_64
rpm -ev mysql-community-client-5.7.19-1.el7.x86_64
rpm -ev mysql-community-libs-5.7.19-1.el7.x86_64
rpm -ev mysql57-community-release-el7-11.noarch
rpm -ev mysql-community-common-5.7.19-1.el7.x86_64
```

4、再次查看

```
rpm -qa|grep -i mysql
```

如果没有，则进行下一步。

5、查找之前老版本 mysql 的目录、并且删除老版本 mysql 的文件和库

```
find / -name mysql
```

```
[root@master ~]# find / -name mysql
/var/lib/mysql
/var/lib/mysql/mysql
/usr/share/mysql
```

6、删除对应的目录

```
rm -rf /var/lib/mysql
rm -rf /var/lib/mysql/mysql
rm -rf /usr/share/mysql
```

注意：卸载后/etc/my.cnf 不会删除，需要进行手工删除

```
rm -rf /etc/my.cnf
```

7、再次查找机器是否安装 mysql

```
rpm -qa|grep -i mysql
```

如果没有，则说明卸载彻底了，即可重新安装 MySQL。

8、安装 MySQL

Linux 下安装 MySQL(参考：<http://www.centoscn.com/mysql/2016/0626/7537.html>)

安装环境：CentOS7 64 位 MINI 版，安装 MySQL5.7

9、配置 YUM 源

在 [MySQL](http://dev.mysql.com/downloads/repo/yum/) 官网中下载 YUM 源 rpm 安装包：<http://dev.mysql.com/downloads/repo/yum/>

Red Hat Enterprise Linux 7 / Oracle Linux 7 (Architecture Independent), RPM Package (mysql57-community-release-el7-8.noarch.rpm)	8.9K	Download
Red Hat Enterprise Linux 6 / Oracle Linux 6 (Architecture Independent), RPM Package (mysql57-community-release-el6-8.noarch.rpm)	8.9K	Download
Red Hat Enterprise Linux 5 / Oracle Linux 5 (Architecture Independent), RPM Package (mysql57-community-release-el5-7.noarch.rpm)	8.2K	Download
Fedora 24 (Architecture Independent), RPM Package (mysql57-community-release-fc24-8.noarch.rpm)	13.0K	Download
Fedora 23 (Architecture Independent), RPM Package (mysql57-community-release-fc23-8.noarch.rpm)	12.9K	Download
Fedora 22 (Architecture Independent), RPM Package (mysql57-community-release-fc22-8.noarch.rpm)	12.9K	Download

10、安装 yum 源

```
yum localinstall mysql57-community-release-el7-8.noarch.rpm
```

11、检查 MySQL 是否安装成功

```
yum repolist enabled | grep "mysql.*-community.*"
```

```
[root@master opt]# yum repolist enabled | grep "mysql.*-community.*"
!mysql-connectors-community/x86_64      MySQL Connectors Community
      36
!mysql-tools-community/x86_64           MySQL Tools Community
      47
!mysql57-community/x86_64              MySQL 5.7 Community Server
      207
```

看到上图所示表示安装成功

12、安装

```
yum install mysql-community-server
```

```
已安装:
mysql-community-server.x86_64 0:5.7.19-1.el7

作为依赖被安装:
mysql-community-client.x86_64 0:5.7.19-1.el7
mysql-community-common.x86_64 0:5.7.19-1.el7
mysql-community-libs.x86_64 0:5.7.19-1.el7

完毕！
```

13、启动 MySQL 服务

```
systemctl start mysqld
```

查看 MySQL 的启动状态

```
systemctl status mysqld
```

```
[root@master opt]# systemctl status mysqld
● mysqld.service - MySQL Server
   Loaded: loaded (/usr/lib/systemd/system/mysqld.service; enabled; ve
   ndor preset: disabled)
   Active: active (running) since 四 2017-07-27 09:14:29 CST; 11min ag
   o
     Docs: man:mysqld(8)
           http://dev.mysql.com/doc/refman/en/using-systemd.html
   Process: 3708 ExecStart=/usr/sbin/mysqld --daemonize --pid-file=/var
   /run/mysqld/mysqld.pid $MYSQLD_OPTS (code=exited, status=0/SUCCESS)
   Process: 3635 ExecStartPre=/usr/bin/mysqld_pre_systemd (code=exited,
   status=0/SUCCESS)
   Main PID: 3711 (mysqld)
     CGroup: /system.slice/mysqld.service
             └─3711 /usr/sbin/mysqld --daemonize --pid-file=/var/run/...

7月 27 09:14:22 master systemd[1]: Starting MySQL Server...
7月 27 09:14:29 master systemd[1]: Started MySQL Server.
```

14、修改 root 默认密码

mysql 安装完成之后，在/var/log/mysqld.log 文件中给 root 生成了一个默认密码。通过下面的方式找到 root 默认密码，然后登录 mysql 进行修改：

```
grep 'temporary password' /var/log/mysqld.log
```

```
2017-07-27T01:14:24.555799Z 1 [Note] A temporary password is generated
for root@localhost: thpNYe=ln8FI
```

```
shell> mysql -uroot -p
```

```
mysql> ALTER USER 'root'@'localhost' IDENTIFIED BY 'MySQL57pw!';
```

注意：mysql5.7默认安装了密码安全检查插件（validate_password），默认密码检查策略要求密码必须包含：大小写字母、数字和特殊符号，并且长度不能少于8位。否则会提示ERROR 1819 (HY000): Your password does not satisfy the current policy requirements错误，如下图所示：

```
mysql> set password for 'yangxin'@'%'=password('123456abc!');
ERROR 1819 (HY000): Your password does not satisfy the current policy requirements
mysql>
```

通过 mysql 环境变量可以查看密码策略的相关信息：

```
mysql> show variables like '%password%';
```

```
mysql> show variables like '%password%'
-> ;
+-----+-----+
| Variable_name | Value |
+-----+-----+
| default_password_lifetime | 0 |
| disconnect_on_expired_password | ON |
| log_built_in_as_identified_by_password | OFF |
| mysql_native_password_proxy_users | OFF |
| old_passwords | 0 |
| report_password |  |
| sha256_password_proxy_users | OFF |
| validate_password_check_user_name | OFF |
| validate_password_dictionary_file |  |
| validate_password_length | 8 |
| validate_password_mixed_case_count | 1 |
| validate_password_number_count | 1 |
| validate_password_policy | MEDIUM |
| validate_password_special_char_count | 1 |
+-----+-----+
14 rows in set (0.00 sec)
```

validate_password_policy：密码策略，默认为MEDIUM策略 validate_password_dictionary_file：密码策略文件，策略为STRONG才需要 validate_password_length：密码最少长度
validate_password_mixed_case_count：大小写字符长度，至少1个 validate_password_number_count：数字至少1个 validate_password_special_char_count：特殊字符至少1个 上述参数是默认策略MEDIUM的密码检查规则。

15、修改密码策略

在/etc/my.cnf 文件添加 validate_password_policy 配置，指定密码策略

修改密码策略

在/etc/my.cnf文件添加validate_password_policy配置，指定密码策略

```
1 # 选择0 (LOW), 1 (MEDIUM), 2 (STRONG) 其中一种, 选择2需要提供密码字典文件
2 validate_password_policy=0
```

如果不需要密码策略，添加my.cnf文件中添加如下配置禁用即可：

```
1 validate_password = off
```

重新启动mysql服务使配置生效：

```
1 systemctl restart mysqld
```

重新启动 mysql 服务使配置生效：

systemctl restart mysqld

登录 mysql，更改密码为 root

ALTER USER 'root'@'localhost' IDENTIFIED BY 'root';

16、设置开机启动

shell> systemctl enable mysqld

shell> systemctl daemon-reload

1) 开启 mysql 的远程登录

默认情况下 mysql 为安全起见，不支持远程登录 mysql，所以需要设置开启远程登录 mysql 的权限

登录 mysql 后输入如下命令：

grant all privileges on *.* to 'root' @'%' identified by 'root';

flush privileges;

2) 开放 Linux 的对外访问的端口 3306

/sbin/iptables -I INPUT -p tcp --dport 3306 -j ACCEPT

三、Tomcat 的安装

步骤：

1) 上传 Tomcat 到 linux 上

2) 解压 Tomcat 到/usr/local 下

tar -xvf apache-tomcat-8.0.52.tar.gz -C /usr/local

```
cd /usr/local
```

```
mv apache-tomcat-8.0.52 tomcat8.0
```

3) 开放 Linux 的对外访问的端口 8080

```
/sbin/iptables -I INPUT -p tcp --dport 8080 -j ACCEPT
```

```
/etc/rc.d/init.d/iptables save
```

4) 启动关闭 Tomcat

```
进入 tomcat 的 bin 下启动 : ./startup.sh
```

```
进入 tomcat 的 bin 下关闭 : ./shutdown.sh
```