

# MariaDB 数据库基础

## 1. 安装数据库软件

```
[root@server0 ~]# yum repolist
已加载插件：langpacks
rhel_dvd | 4.1 kB 00:00
(1/2): rhel_dvd/group_gz | 134 kB 00:00
(2/2): rhel_dvd/primary_db | 3.4 MB 00:00
源标识 源名称 状态
rhel_dvd Remote classroom copy of dvd 4,305
repolist: 4,305
[root@server0 ~]# yum -y install mariadb-server
已加载插件：langpacks
正在解决依赖关系
```

## 2. 重启数据库服务

```
完毕！
[root@server0 ~]# systemctl restart mariadb
```

## 3. 进入数据库

```
[root@server0 ~]# mysql
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MariaDB connection id is 2
Server version: 5.5.35-MariaDB MariaDB Server

Copyright (c) 2000, 2013, Oracle, Monty Program Ab and others.

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

MariaDB [(none)]>
```

```
MariaDB [(none)]> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| test |
+-----+
4 rows in set (0.01 sec)
```

//查看数据库

```
MariaDB [(none)]> create database nsd1711;
Query OK, 1 row affected (0.00 sec)

MariaDB [(none)]> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| nsd1711 |
| performance_schema |
| test |
+-----+
5 rows in set (0.00 sec)
```

//创建数据库

```
MariaDB [(none)]> drop database nsd;  
Query OK, 0 rows affected (0.01 sec) //删除数据库
```

为数据库帐号修改密码

Mysqldadmin [-u 用户名] [-p[旧密码]] password '新密码';

#### 4.创建用户和密码并登陆

```
[root@server0 ~]# mysqladmin -u root password '123' ←  
[root@server0 ~]# mysql -u root -p123 ←  
Welcome to the MariaDB monitor.  Commands end with ; or \g.  
Your MariaDB connection id is 4  
Server version: 5.5.35-MariaDB MariaDB Server  
  
Copyright (c) 2000, 2013, Oracle, Monty Program Ab and others.  
  
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
```

#### 5.导入数据到新建的库中 nsd1711

```
[root@server0 ~]# wget http://172.25.254.254/pub/materials/users.sql ←  
-- 2017-12-27 15:37:03 -- http://172.25.254.254/pub/materials/users.sql  
正在连接 172.25.254.254:80... 已连接。
```

```
[root@server0 ~]# mysql -u root -p123 nsd1711 < users.sql ←  
[root@server0 ~]# mysql -u root -p123 ←  
Welcome to the MariaDB monitor.  Commands end with ; or \g.  
Your MariaDB connection id is 6  
Server version: 5.5.35-MariaDB MariaDB Server  
  
Copyright (c) 2000, 2013, Oracle, Monty Program Ab and others.  
  
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
```

```
MariaDB [(none)]> show databases; ←  
+-----+  
| Database |  
+-----+  
| information_schema |  
| mysql |  
| nsd1711 |  
| performance_schema |  
| test |  
+-----+  
5 rows in set (0.00 sec)
```

```
MariaDB [(none)]> use nsd1711; ←  
Reading table information for completion of table and column names  
You can turn off this feature to get a quicker startup with -A  
  
Database changed  
MariaDB [nsd1711]> show tables; ←  
+-----+  
| Tables_in_nsd1711 |  
+-----+  
| base |  
| location |  
+-----+  
2 rows in set (0.00 sec)
```

```
MariaDB [nsd1711]> select * from base; ←
```

id	name	password
1	Tom	123
2	Barbara	456
3	James	solicitous
4	Smith	tarena
5	Barbara	pwd123

5 rows in set (0.00 sec)

```
MariaDB [nsd1711]> select name,password from base; ←
```

name	password
Tom	123
Barbara	456
James	solicitous
Smith	tarena
Barbara	pwd123

5 rows in set (0.00 sec)

```
MariaDB [nsd1711]> select * from location; ←
```

id	city
1	Beijing
2	Paris
3	Sunnyvale
4	Berlin
5	Sunnyvale

5 rows in set (0.00 sec)

## 6.数据库的授权

除了 root 用户，此 nsd1711 数据库只能被用户 dc 查询，此用户的密码为 123

```
grant select on nsd1711.* to dc@localhost indentified by '123';
```

当 dc 用户从 localhost 登陆输入密码 123 验证成功，将会获得 nsd1711 库中所有的表的查询权限。

```

MariaDB [nsd1711]> grant select on nsd1711.* to dc@localhost identified
by '123'; ← 授权命令
Query OK, 0 rows affected (0.00 sec)

MariaDB [nsd1711]> select user,password from mysql.user; ←
+-----+-----+
| user | password |
+-----+-----+
| root | *23AE809DDACAF96AF0FD78ED04B6A265E05AA257 |
| root |          |
| root |          |
| root |          |
|      |          |
| dc   | *23AE809DDACAF96AF0FD78ED04B6A265E05AA257 |
+-----+-----+
7 rows in set (0.00 sec)

```

## 7.有条件的查询 where

```

MariaDB [nsd1711]> select * from base where password='123';
+-----+-----+-----+
| id  | name | password |
+-----+-----+-----+
| 1   | Tom  | 123      |
+-----+-----+-----+
1 row in set (0.01 sec)

```

```

MariaDB [nsd1711]> select name from base where password='123';
+-----+
| name |
+-----+
| Tom  |
+-----+
1 row in set (0.00 sec)

```

```

MariaDB [nsd1711]> select * from base where name='tom';
+-----+-----+-----+
| id  | name | password |
+-----+-----+-----+
| 1   | Tom  | 123      |
+-----+-----+-----+
1 row in set (0.00 sec)

```

## 8.多条件的查询

```

MariaDB [nsd1711]> select * from base where password='123' and name='tom';
←
+-----+-----+-----+
| id  | name | password |
+-----+-----+-----+
| 1   | Tom  | 123      |
+-----+-----+-----+
1 row in set (0.00 sec)

```

```
MariaDB [nsd1711]> select * from base where password='123' or password='456';
```

id	name	password
1	Tom	123
2	Barbara	456

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

## 9. 查询测试

在 **server0** 上使用数据库 **nsd1711**，并使用相应的 **SQL** 查询以回答下列问题：

密码是 **solicitous** 的人的名字？

**select \* from base where password='solicitous';**

**select name from base where password='solicitous';**

有多少人的姓名是 **Barbara**，同时居住在 **Sunnyvale**？

```
MariaDB [nsd1711]> select * from base,location where base.name='Barbara' and location.city='Sunnyvale' and base.id=location.id;
```

id	name	password	id	city
5	Barbara	pwd123	5	Sunnyvale

```
1 row in set (0.00 sec)
```

```
MariaDB [nsd1711]> select count(*) from base,location where base.name='Barbara' and location.city='Sunnyvale' and base.id=location.id;
```

count(*)
1

```
1 row in set (0.00 sec)
```

```
MariaDB [nsd1711]> insert base values('6','Barbara','654321');
Query OK, 1 row affected (0.04 sec)
```

```
MariaDB [nsd1711]> insert location values('6','Sunnyvale');
Query OK, 1 row affected (0.02 sec)
```

```
MariaDB [nsd1711]> select * from base,location where base.name='Barbara' and location.city='Sunnyvale' and base.id=location.id;
```

id	name	password	id	city
5	Barbara	pwd123	5	Sunnyvale
6	Barbara	654321	6	Sunnyvale

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

## 10. 禁止空密码 **root** 用户访问 **mariadb** 数据库



```
MariaDB [nsd1711] > select user,host,password from mysql.user; ←
```

user	host	password
root	localhost	*23AE809DDACAF96AF0FD78ED04B6A265E05AA257
root	server0.example.com	
root	127.0.0.1	
root	::1	
	localhost	
	server0.example.com	
dc	localhost	*23AE809DDACAF96AF0FD78ED04B6A265E05AA257

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

```
MariaDB [nsd1711] > select user,host,password from mysql.user where password='';
```

user	host	password
root	server0.example.com	
root	127.0.0.1	
root	::1	
	localhost	
	server0.example.com	

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

```
MariaDB [nsd1711] > delete from mysql.user where password=''; ←
Query OK, 5 rows affected (0.00 sec)
```

```
MariaDB [nsd1711] > select user,host,password from mysql.user; ←
```

user	host	password
root	localhost	*23AE809DDACAF96AF0FD78ED04B6A265E05AA257
dc	localhost	*23AE809DDACAF96AF0FD78ED04B6A265E05AA257

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

```
MariaDB [nsd1711] > flush privileges; ← 刷新
Query OK, 0 rows affected (0.00 sec)
```

```
MariaDB [nsd1711] > quit
Bye
[root@server0 ~]# mysql -u root -h server0.example.com ← 测试不可以登陆为正确
ERROR 1130 (HY000): Host 'server0.example.com' is not allowed to connect to this Mari
aDB server
```