实验环境：vip-server

操作系统：centos7.2

环境：关闭防火墙/selinux，关闭之前安装mysql或者mariadb服务

#环境准备

[root@room8pc205 ~]# netstat -antpu | grep :3306

[root@room8pc205 ~]# ps aux | grep mysql

root 33535 0.0 0.0 113172 1424 ? S 15:26 0:00 /bin/bash /usr/bin/wps /root/桌面/mysql多实例.docx

root 33538 5.8 6.2 3534036 252444 ? Sl 15:26 0:33 /opt/kingsoft/wps-office/office6/wps /root/桌面/mysq多实例.docx

root 33881 0.0 0.1 151552 5124 pts/2 S+ 15:30 0:00 vim mysql.md

root 34334 0.0 0.0 112720 976 pts/0 S+ 15:35 0:00 grep --color=auto mysql

[root@room8pc205 ~]# cd /data/soft/vipd/

[root@room8pc205 vipd]# ls mysql-5.7.20-linux-glibc2.12-x86\_64.tar.gz

mysql-5.7.20-linux-glibc2.12-x86\_64.tar.gz

[root@room8pc205 vipd]# tar -xf mysql-5.7.20-linux-glibc2.12-x86\_64.tar.gz

[root@room8pc205 vipd]# ls mysql-5.7.20-linux-glibc2.12-x86\_64

bin COPYING docs include lib man README share support-files

[root@room8pc205 vipd]# mv mysql-5.7.20-linux-glibc2.12-x86\_64 /usr/local/mysql

[root@room8pc205 vipd]# ls /usr/local/mysql/

bin COPYING docs include lib man README share support-files

[root@room8pc205 vipd]# vim /etc/profile

[root@room8pc205 vipd]# cd

[root@room8pc205 ~]# tail -2 /etc/profile

PATH=/usr/local/mysql/bin:$PATH

export PATH

[root@room8pc205 ~]# source /etc/profile

#修改配置文件

[root@room8pc205 ~]# ll /etc/my.cnf

-rw-r--r-- 1 root root 596 11月 11 09:49 /etc/my.cnf

[root@room8pc205 ~]# mv /etc/my.cnf /etc/my.cnf.bak

[root@room8pc205 ~]# vim /etc/my.cnf

[root@room8pc205 ~]# cat /etc/my.cnf

[mysqld\_multi]

mysqld=/usr/local/mysql/bin/mysqld\_safe

mysqladmin=/usr/local/mysql/bin/mysqladmin

user=mysql

[mysqld1]

datadir=/data3307

port=3307

socket=/data3307/mysql3307.sock

pid-file=/data3307/mysqld.pid

log-error=/data3307/mysqld.err

[mysqld2]

datadir=/data3308

port=3308

socket=/data3308/mysql3308.sock

pid-file=/data3308/mysqld.pid

log-error=/data3308/mysqld.err

[mysqld3]

datadir=/data3309

port=3309

socket=/data3309/mysql3309.sock

pid-file=/data3309/mysqld.pid

log-error=/data3309/mysqld.err

[root@room8pc205 ~]# useradd -s /sbin/nologin mysql

[root@room8pc205 ~]# mkdir /data3307 /data3308 /data3309

[root@room8pc205 ~]# ll -d /data330\*

drwxr-xr-x 2 root root 6 11月 21 17:17 /data3307

drwxr-xr-x 2 root root 6 11月 21 17:17 /data3308

drwxr-xr-x 2 root root 6 11月 21 17:17 /data3309

[root@room8pc205 ~]# chown -R mysql:mysql /data3307

[root@room8pc205 ~]# chown -R mysql:mysql /data3308

[root@room8pc205 ~]# chown -R mysql:mysql /data3309

[root@room8pc205 ~]# ll -d /data330\*

drwxr-xr-x 2 mysql mysql 6 11月 21 17:17 /data3307

drwxr-xr-x 2 mysql mysql 6 11月 21 17:17 /data3308

drwxr-xr-x 2 mysql mysql 6 11月 21 17:17 /data3309

#初始化数据库

[root@room8pc205 ~]# mysqld --user=mysql --basedir=/usr/local/mysql --datadir=/data3307 --initialize

2018-11-21T09:36:15.416512Z 0 [Warning] TIMESTAMP with implicit DEFAULT value is deprecated. Please use --explicit\_defaults\_for\_timestamp server option (see documentation for more details).

2018-11-21T09:36:15.669017Z 0 [Warning] InnoDB: New log files created, LSN=45790

2018-11-21T09:36:15.731991Z 0 [Warning] InnoDB: Creating foreign key constraint system tables.

2018-11-21T09:36:15.791743Z 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: e458603b-ed70-11e8-9c9f-000c29e03399.

2018-11-21T09:36:15.792609Z 0 [Warning] Gtid table is not ready to be used. Table 'mysql.gtid\_executed' cannot be opened.

2018-11-21T09:36:15.793376Z 1 [Note] A temporary password is generated for root@localhost: Ndq/pfa6W>wP

[root@room8pc205 ~]# mysqld --user=mysql --basedir=/usr/local/mysql --datadir=/data3308 --initialize

2018-11-21T09:37:24.117722Z 0 [Warning] TIMESTAMP with implicit DEFAULT value is deprecated. Please use --explicit\_defaults\_for\_timestamp server option (see documentation for more details).

2018-11-21T09:37:24.411783Z 0 [Warning] InnoDB: New log files created, LSN=45790

2018-11-21T09:37:24.476262Z 0 [Warning] InnoDB: Creating foreign key constraint system tables.

2018-11-21T09:37:24.539180Z 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: 0d526726-ed71-11e8-a47d-000c29e03399.

2018-11-21T09:37:24.540201Z 0 [Warning] Gtid table is not ready to be used. Table 'mysql.gtid\_executed' cannot be opened.

2018-11-21T09:37:24.540970Z 1 [Note] A temporary password is generated for root@localhost: n-ozhpt=x5Qe

[root@room8pc205 ~]# mysqld --user=mysql --basedir=/usr/local/mysql --datadir=/data3309 --initialize

2018-11-21T09:38:00.084811Z 0 [Warning] TIMESTAMP with implicit DEFAULT value is deprecated. Please use --explicit\_defaults\_for\_timestamp server option (see documentation for more details).

2018-11-21T09:38:00.553960Z 0 [Warning] InnoDB: New log files created, LSN=45790

2018-11-21T09:38:00.644667Z 0 [Warning] InnoDB: Creating foreign key constraint system tables.

2018-11-21T09:38:00.707259Z 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: 22e13630-ed71-11e8-a81e-000c29e03399.

2018-11-21T09:38:00.710626Z 0 [Warning] Gtid table is not ready to be used. Table 'mysql.gtid\_executed' cannot be opened.

2018-11-21T09:38:00.711435Z 1 [Note] A temporary password is generated for root@localhost: ijRwW::i8rmd

[root@room8pc205 ~]# ll /data330\*

/data3307:

总用量 110628

-rw-r----- 1 mysql mysql 56 11月 21 17:36 auto.cnf

-rw-r----- 1 mysql mysql 419 11月 21 17:36 ib\_buffer\_pool

-rw-r----- 1 mysql mysql 12582912 11月 21 17:36 ibdata1

-rw-r----- 1 mysql mysql 50331648 11月 21 17:36 ib\_logfile0

-rw-r----- 1 mysql mysql 50331648 11月 21 17:36 ib\_logfile1

drwxr-x--- 2 mysql mysql 4096 11月 21 17:36 mysql

drwxr-x--- 2 mysql mysql 8192 11月 21 17:36 performance\_schema

drwxr-x--- 2 mysql mysql 8192 11月 21 17:36 sys

/data3308:

总用量 110628

-rw-r----- 1 mysql mysql 56 11月 21 17:37 auto.cnf

-rw-r----- 1 mysql mysql 419 11月 21 17:37 ib\_buffer\_pool

-rw-r----- 1 mysql mysql 12582912 11月 21 17:37 ibdata1

-rw-r----- 1 mysql mysql 50331648 11月 21 17:37 ib\_logfile0

-rw-r----- 1 mysql mysql 50331648 11月 21 17:37 ib\_logfile1

drwxr-x--- 2 mysql mysql 4096 11月 21 17:37 mysql

drwxr-x--- 2 mysql mysql 8192 11月 21 17:37 performance\_schema

drwxr-x--- 2 mysql mysql 8192 11月 21 17:37 sys

/data3309:

总用量 110628

-rw-r----- 1 mysql mysql 56 11月 21 17:38 auto.cnf

-rw-r----- 1 mysql mysql 419 11月 21 17:38 ib\_buffer\_pool

-rw-r----- 1 mysql mysql 12582912 11月 21 17:38 ibdata1

-rw-r----- 1 mysql mysql 50331648 11月 21 17:38 ib\_logfile0

-rw-r----- 1 mysql mysql 50331648 11月 21 17:38 ib\_logfile1

drwxr-x--- 2 mysql mysql 4096 11月 21 17:38 mysql

drwxr-x--- 2 mysql mysql 8192 11月 21 17:38 performance\_schema

drwxr-x--- 2 mysql mysql 8192 11月 21 17:38 sys

#启动服务

[root@room8pc205 ~]# netstat -antpu | grep :330

[root@room8pc205 ~]# mysqld\_multi start 1

[root@room8pc205 ~]# mysqld\_multi start 2

[root@room8pc205 ~]# mysqld\_multi start 3

[root@room8pc205 ~]# netstat -antpu | grep :330

tcp6 0 0 :::3307 :::\* LISTEN 43940/mysqld

tcp6 0 0 :::3308 :::\* LISTEN 44103/mysqld

tcp6 0 0 :::3309 :::\* LISTEN 44265/mysqld

[root@room8pc205 ~]# ps -C mysqld

PID TTY TIME CMD

43940 pts/0 00:00:00 mysqld

44103 pts/0 00:00:00 mysqld

44265 pts/0 00:00:00 mysqld

[root@room8pc205 ~]# ps aux | grep mysql

root 43813 0.0 0.0 113308 1644 pts/0 S 17:47 0:00 /bin/sh /usr/local/mysql/bin/mysqld\_safe --datadir=/data3307 --port=3307 --socket=/data3307/mysql3307.sock --pid-file=/data3307/mysqld.pid --log-error=/data3307/mysqld.err

mysql 43940 0.8 4.4 1192872 178004 pts/0 Sl 17:47 0:00 /usr/local/mysql/bin/mysqld --basedir=/usr/local/mysql --datadir=/data3307 --plugin-dir=/usr/local/mysql/lib/plugin --user=mysql --log-error=/data3307/mysqld.err --pid-file=/data3307/mysqld.pid --socket=/data3307/mysql3307.sock --port=3307

root 43976 0.1 0.0 113308 1644 pts/0 S 17:47 0:00 /bin/sh /usr/local/mysql/bin/mysqld\_safe --datadir=/data3308 --port=3308 --socket=/data3308/mysql3308.sock --pid-file=/data3308/mysqld.pid --log-error=/data3308/mysqld.err

mysql 44103 1.0 4.3 1192872 175980 pts/0 Sl 17:47 0:00 /usr/local/mysql/bin/mysqld --basedir=/usr/local/mysql --datadir=/data3308 --plugin-dir=/usr/local/mysql/lib/plugin --user=mysql --log-error=/data3308/mysqld.err --pid-file=/data3308/mysqld.pid --socket=/data3308/mysql3308.sock --port=3308

root 44138 0.0 0.0 113308 1644 pts/0 S 17:47 0:00 /bin/sh /usr/local/mysql/bin/mysqld\_safe --datadir=/data3309 --port=3309 --socket=/data3309/mysql3309.sock --pid-file=/data3309/mysqld.pid --log-error=/data3309/mysqld.err

mysql 44265 1.3 4.3 1192872 175980 pts/0 Sl 17:47 0:00 /usr/local/mysql/bin/mysqld --basedir=/usr/local/mysql --datadir=/data3309 --plugin-dir=/usr/local/mysql/lib/plugin --user=mysql --log-error=/data3309/mysqld.err --pid-file=/data3309/mysqld.pid --socket=/data3309/mysql3309.sock --port=3309

root 44348 0.0 0.0 112724 976 pts/0 S+ 17:48 0:00 grep --color=auto mysql

#连接本机数据库服务

[root@room8pc205 ~]# mysql -uroot -p'Ndq/pfa6W>wP' -S /data3307/mysql3307.sock

mysql> alter user user() identified by '123456';

Query OK, 0 rows affected (0.00 sec)

mysql> create database db3307;

Query OK, 1 row affected (0.00 sec)

mysql> show databases;

+--------------------+

| Database |

+--------------------+

| information\_schema |

| db3307 |

| mysql |

| performance\_schema |

| sys |

+--------------------+

5 rows in set (0.00 sec)

mysql> exit

Bye

[root@room8pc205 ~]# mysql -uroot -p'n-ozhpt=x5Qe' -S /data3308/mysql3308.sock

mysql> alter user user() identified by '123456';

Query OK, 0 rows affected (0.00 sec)

mysql> create database db3308;

Query OK, 1 row affected (0.00 sec)

mysql> show databases;

+--------------------+

| Database |

+--------------------+

| information\_schema |

| db3308 |

| mysql |

| performance\_schema |

| sys |

+--------------------+

5 rows in set (0.00 sec)

mysql> exit

Bye

[root@room8pc205 ~]# mysql -uroot -p'ijRwW::i8rmd' -S /data3309/mysql3309.sock

mysql> alter user user() identified by '123456';

Query OK, 0 rows affected (0.00 sec)

mysql> create database db3309;

Query OK, 1 row affected (0.00 sec)

mysql> show databases;

+--------------------+

| Database |

+--------------------+

| information\_schema |

| db3309 |

| mysql |

| performance\_schema |

| sys |

+--------------------+

5 rows in set (0.00 sec)

mysql> exit

Bye

#停止服务

[root@room8pc205 ~]# netstat -antpu | grep mysql

tcp6 0 0 :::3307 :::\* LISTEN 5436/mysqld

tcp6 0 0 :::3308 :::\* LISTEN 5600/mysqld

tcp6 0 0 :::3309 :::\* LISTEN 5774/mysqld

[root@room8pc205 ~]# mysqld\_multi --user=root --password=123456 stop 2

[root@room8pc205 ~]# netstat -antpu | grep mysql

tcp6 0 0 :::3307 :::\* LISTEN 5436/mysqld

tcp6 0 0 :::3309 :::\* LISTEN 5774/mysqld

[root@room8pc205 ~]# mysqld\_multi --user=root --password=123456 stop 1

[root@room8pc205 ~]# mysqld\_multi --user=root --password=123456 stop 3

[root@room8pc205 ~]# netstat -antpu | grep mysql

#如何不影响系统默认的数据库服务

[root@room8pc205 ~]# mv /etc/my.cnf /etc/mysqld\_multi.cnf

[root@room8pc205 ~]# mv /etc/my.cnf.bak /etc/my.cnf

[root@room8pc205 ~]# systemctl start mariadb

[root@room8pc205 ~]# netstat -antpu | grep mysql

tcp 0 0 0.0.0.0:3306 0.0.0.0:\* LISTEN 7423/mysqld

[root@room8pc205 ~]# mysqld\_multi --defaults-extra-file=/etc/mysqld\_multi.cnf report

Reporting MySQL servers

MySQL server from group: mysqld1 is not running

MySQL server from group: mysqld2 is not running

MySQL server from group: mysqld3 is not running

[root@room8pc205 ~]# mysqld\_multi --defaults-extra-file=/etc/mysqld\_multi.cnf start 1

[root@room8pc205 ~]# mysqld\_multi --defaults-extra-file=/etc/mysqld\_multi.cnf start 2

[root@room8pc205 ~]# mysqld\_multi --defaults-extra-file=/etc/mysqld\_multi.cnf start 3

[root@room8pc205 ~]# netstat -antpu | grep mysql

tcp 0 0 0.0.0.0:3306 0.0.0.0:\* LISTEN 7423/mysqld

tcp6 0 0 :::3307 :::\* LISTEN 7934/mysqld

tcp6 0 0 :::3308 :::\* LISTEN 8174/mysqld

tcp6 0 0 :::3309 :::\* LISTEN 8421/mysqld

[root@room8pc205 ~]# mysqld\_multi --defaults-extra-file=/etc/mysqld\_multi.cnf report

Reporting MySQL servers

MySQL server from group: mysqld1 is running

MySQL server from group: mysqld2 is running

MySQL server from group: mysqld3 is running

[root@room8pc205 ~]# mysqld\_multi --defaults-extra-file=/etc/mysqld\_multi.cnf --user=root --password=123456 stop 1

[root@room8pc205 ~]# netstat -antpu | grep mysql

tcp 0 0 0.0.0.0:3306 0.0.0.0:\* LISTEN 7423/mysqld

tcp6 0 0 :::3308 :::\* LISTEN 8174/mysqld

tcp6 0 0 :::3309 :::\* LISTEN 8421/mysqld

[root@room8pc205 ~]# mysqld\_multi --defaults-extra-file=/etc/mysqld\_multi.cnf --user=root --password=123456 stop 2

[root@room8pc205 ~]# mysqld\_multi --defaults-extra-file=/etc/mysqld\_multi.cnf --user=root --password=123456 stop 3

[root@room8pc205 ~]# netstat -antpu | grep mysql

tcp 0 0 0.0.0.0:3306 0.0.0.0:\* LISTEN 7423/mysqld