模拟同步在线数据库

环境：rhel7.5系统虚拟机两台，关闭防火墙，SELinux，搭建好yum

软件：为方便测试采用mariadb，

#安装数据库，配置root用户密码，授权同步用户

[root@server1 ~]# yum -y install mariadb mariadb-server

[root@server1 ~]# systemctl start mariadb

[root@server1 ~]# mysql

Welcome to the MariaDB monitor. Commands end with ; or \g.

Your MariaDB connection id is 2

Server version: 5.5.56-MariaDB MariaDB Server

Copyright (c) 2000, 2017, Oracle, MariaDB Corporation Ab and others.

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

MariaDB [(none)]> set password=password('123456');

Query OK, 0 rows affected (0.00 sec)

MariaDB [(none)]> grant replication slave on \*.\* to repluser@'%' identified by '123456';

Query OK, 0 rows affected (0.00 sec)

MariaDB [(none)]> flush privileges;

Query OK, 0 rows affected (0.00 sec)

MariaDB [(none)]> exit

Bye

#修改配置文件，开启binlog日志

[root@server1 ~]# systemctl start mariadb

[root@server1 ~]# mysql

Welcome to the MariaDB monitor. Commands end with ; or \g.

Your MariaDB connection id is 2

Server version: 5.5.56-MariaDB MariaDB Server

Copyright (c) 2000, 2017, Oracle, MariaDB Corporation Ab and others.

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

MariaDB [(none)]> set password=password('123456');

Query OK, 0 rows affected (0.00 sec)

MariaDB [(none)]> grant all on \*.\* to root@'%' identified by '123456' with grant option;

Query OK, 0 rows affected (0.01 sec)

MariaDB [(none)]> grant replication slave on \*.\* to repluser@'%' identified by '123456';

Query OK, 0 rows affected (0.00 sec)

MariaDB [(none)]> flush privileges;

Query OK, 0 rows affected (0.00 sec)

MariaDB [(none)]> exit

Bye

[root@server1 ~]# vim /etc/my.cnf

[root@server1 ~]# cat /etc/my.cnf | head -3

[mysqld]

server\_id=1

log-bin=server1

[root@server1 ~]# systemctl restart mariadb

[root@server1 ~]# mysql -uroot -p123456

MariaDB [(none)]> create database mydb default character set utf8;

Query OK, 1 row affected (0.00 sec)

MariaDB [(none)]> use mydb

Database changed

MariaDB [mydb]> create table tt(id int(11));

Query OK, 0 rows affected (0.03 sec)

MariaDB [mydb]> select \* from tt;

Empty set (0.00 sec)

MariaDB [(none)]> reset master;

Query OK, 0 rows affected (0.03 sec)

MariaDB [(none)]> show master status;

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

| File | Position | Binlog\_Do\_DB | Binlog\_Ignore\_DB |

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

| server1.000001 | 245 | | |

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

1 row in set (0.00 sec)

MariaDB [mydb]> exit

Bye

#从库安装mariadb，设置初始密码并修改配置，开启server\_id

[root@server2 ~]# yum -y install mariadb-server

[root@server2 ~]# mysql

MariaDB [(none)]> set password=password('123456');

Query OK, 0 rows affected (0.00 sec)

MariaDB [(none)]> reset slave;

Query OK, 0 rows affected (0.00 sec)

MariaDB [(none)]> show slave status;

Empty set (0.00 sec)

MariaDB [(none)]> exit

Bye

#编写python程序，模拟持续向主库写入

[root@room8pc205 soft]# vim insert.py

[root@room8pc205 soft]# cat insert.py

#!/usr/bin/env python3

import pymysql

import time

conn = pymysql.connect(

host = '192.168.4.1',

port = 3306,

user = 'root',

password = '123456',

db = 'mydb',

charset = 'utf8'

)

cursor = conn.cursor()

sql\_insert = 'insert into tt values(%s)'

for i in range(1000):

cursor.execute(sql\_insert, int(i))

conn.commit()

time.sleep(1)

cursor.close()

conn.close()

#执行python程序，检测主库master状态

[root@server1 ~]# mysql -uroot -p123456

MariaDB [(none)]> show master status;

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

| File | Position | Binlog\_Do\_DB | Binlog\_Ignore\_DB |

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

| server1.000001 | 389 | | |

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

1 row in set (0.00 sec)

MariaDB [(none)]> show master status;

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

| File | Position | Binlog\_Do\_DB | Binlog\_Ignore\_DB |

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

| server1.000001 | 389 | | |

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

1 row in set (0.00 sec)

MariaDB [(none)]> select count(\*) from mydb.tt;

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

| count(\*) |

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

| 12 |

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

1 row in set (0.00 sec)

MariaDB [(none)]> show master status;

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

| File | Position | Binlog\_Do\_DB | Binlog\_Ignore\_DB |

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

| server1.000001 | 3673 | | |

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

1 row in set (0.00 sec)

MariaDB [(none)]> select count(\*) from mydb.tt;

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

| count(\*) |

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

| 22 |

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

1 row in set (0.00 sec)

MariaDB [(none)]> show master status;

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

| File | Position | Binlog\_Do\_DB | Binlog\_Ignore\_DB |

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

| server1.000001 | 4771 | | |

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

1 row in set (0.00 sec)

#持续写入中

[root@server1 ~]# ls

libev-4.15-7.el7.x86\_64.rpm percona-xtrabackup-24-2.4.7-1.el7.x86\_64.rpm

[root@server1 ~]# yum -y localinstall \*.rpm

[root@server1 ~]# innobackupex --slave-info --user='root' --password='123456' --host='localhost' --no-timestamp ./backup

190313 01:30:48 completed OK!

[root@server1 ~]# ls

backup libev-4.15-7.el7.x86\_64.rpm percona-xtrabackup-24-2.4.7-1.el7.x86\_64.rpm

[root@server1 ~]# cat backup/xtrabackup\_info

uuid = 28558d1c-4551-11e9-b822-00000000ee01

name =

tool\_name = innobackupex

tool\_command = --slave-info --user=root --password=... --host=localhost --no-timestamp ./backup

tool\_version = 2.4.7

ibbackup\_version = 2.4.7

server\_version = 5.5.56-MariaDB

start\_time = 2019-03-13 01:30:46

end\_time = 2019-03-13 01:30:48

lock\_time = 0

binlog\_pos = filename 'server1.000001', position '23095'

innodb\_from\_lsn = 0

innodb\_to\_lsn = 1721592

partial = N

incremental = N

format = file

compact = N

compressed = N

encrypted = N

[root@server1 ~]# scp -r ./backup/ 192.168.4.2:/root

[root@server2 ~]# ls

backup libev-4.15-7.el7.x86\_64.rpm percona-xtrabackup-24-2.4.7-1.el7.x86\_64.rpm

[root@server2 ~]# yum -y localinstall \*.rpm

[root@server2 ~]# innobackupex --apply-log backup

190313 01:34:16 completed OK!

[root@server2 ~]# innobackupex --copy-back ./backup/

190313 01:34:49 completed OK!

[root@server2 ~]# chown -R mysql.mysql /var/lib/mysql/

[root@server2 ~]# systemctl start maraidb

Failed to start maraidb.service: Unit not found.

[root@server2 ~]# systemctl start mariadb

[root@server2 ~]# mysql -uroot -p123456

Welcome to the MariaDB monitor. Commands end with ; or \g.

Your MariaDB connection id is 2

Server version: 5.5.56-MariaDB MariaDB Server

Copyright (c) 2000, 2017, Oracle, MariaDB Corporation Ab and others.

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

MariaDB [(none)]> show databases;

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

| Database |

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

| information\_schema |

| mydb |

| mysql |

| performance\_schema |

| test |

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

5 rows in set (0.00 sec)

MariaDB [(none)]> change master to

-> master\_host='192.168.4.1',

-> master\_user='repluser',

-> master\_password='123456',

-> master\_log\_file='server1.000001',

-> master\_log\_pos=23095;

Query OK, 0 rows affected (0.10 sec)

MariaDB [(none)]> start slave;

Query OK, 0 rows affected (0.01 sec)

MariaDB [(none)]> show slave status \G

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 1. row \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Slave\_IO\_State: Waiting for master to send event

Master\_Host: 192.168.4.1

Master\_User: repluser

Master\_Port: 3306

Connect\_Retry: 60

Master\_Log\_File: server1.000001

Read\_Master\_Log\_Pos: 98719

Relay\_Log\_File: mariadb-relay-bin.000002

Relay\_Log\_Pos: 76151

Relay\_Master\_Log\_File: server1.000001

Slave\_IO\_Running: Yes

Slave\_SQL\_Running: Yes

Replicate\_Do\_DB:

Replicate\_Ignore\_DB:

Replicate\_Do\_Table:

Replicate\_Ignore\_Table:

Replicate\_Wild\_Do\_Table:

Replicate\_Wild\_Ignore\_Table:

Last\_Errno: 0

Last\_Error:

Skip\_Counter: 0

Exec\_Master\_Log\_Pos: 98719

Relay\_Log\_Space: 76447

Until\_Condition: None

Until\_Log\_File:

Until\_Log\_Pos: 0

Master\_SSL\_Allowed: No

Master\_SSL\_CA\_File:

Master\_SSL\_CA\_Path:

Master\_SSL\_Cert:

Master\_SSL\_Cipher:

Master\_SSL\_Key:

Seconds\_Behind\_Master: 0

Master\_SSL\_Verify\_Server\_Cert: No

Last\_IO\_Errno: 0

Last\_IO\_Error:

Last\_SQL\_Errno: 0

Last\_SQL\_Error:

Replicate\_Ignore\_Server\_Ids:

Master\_Server\_Id: 1

1 row in set (0.00 sec)

MariaDB [(none)]> select count(\*) from mydb.tt;

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

| count(\*) |

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

| 553 |

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

1 row in set (0.00 sec)

MariaDB [(none)]> select count(\*) from mydb.tt;

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

| count(\*) |

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

| 557 |

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

1 row in set (0.00 sec)

MariaDB [(none)]> select count(\*) from mydb.tt;

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

| count(\*) |

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

| 689 |

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

1 row in set (0.00 sec)

MariaDB [(none)]> exit

Bye

#做完change master to以后需要稍微等一会儿，如果数据量较大，Slave\_IO\_Running线程会是connecting状态，大概需要等15秒左右

#至此，线上数据库加从库操作成功