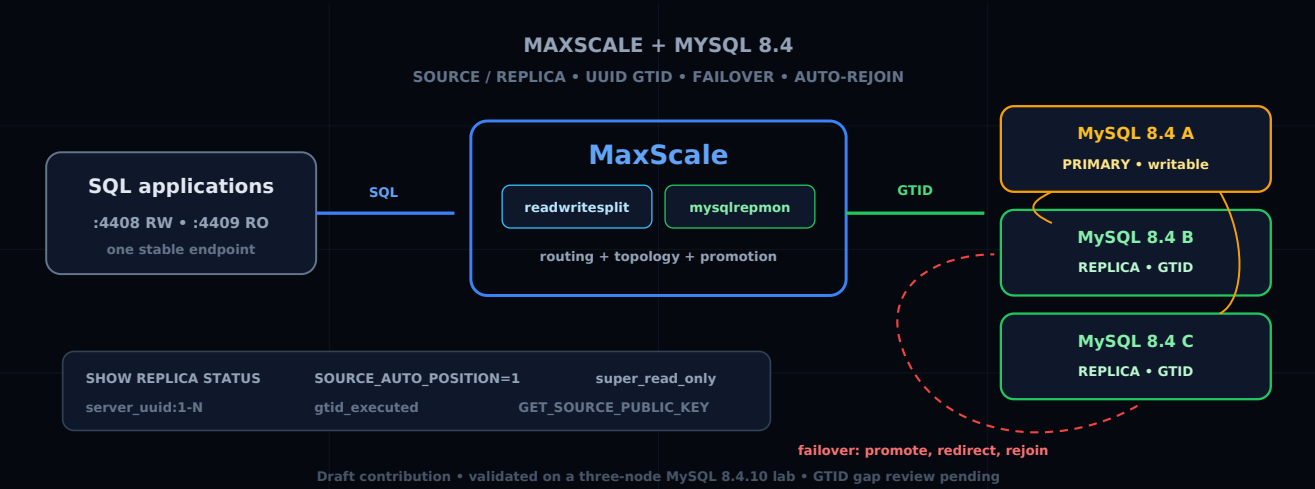


MaxScale + MySQL 8.4 Source/Replica GTID

Aurélien LEQUOY · 2026-07-27

MAXSCALE MYSQL MYSQL-8.4 REPLICATION GTID FAILOVER HIGH-AVAILABILITY PROXY



2026-07-27 PR #420 MaxScale mysqlrepmon PR draft MySQL 8.4.10

MaxScale mariadbmon MariaDB / MySQL MySQL 8.4 / MASTER UUID GTID

SQL replica primary

-
- switchover failover rejoin
- primary replicas

MySQL 8.4 SHOW SLAVE STATUS SHOW REPLICA STATUS

MySQL 8.4

MySQL 8.0.22 Source/Replica MySQL 8.4

	MariaDB /	MySQL 8.4
--	-----------	-----------


```
domain_id-server_id-sequence
```

```
---
```

```
0-101-7842
```

```
domain [-----]MASTER USE GTID [-----]
```

MySQL GTID

MySQL [-----] UUID [-----] GTID [---]

```
155fa720-7623-11f1-9a78-bc241174cab8:1-76
```

[-----] UUID [-----]

```
155fa720-7623-11f1-9a78-bc241174cab8:1-10:20-30,  
7fd8c42a-7630-11f1-99af-bc241174cab8:1-8
```

MySQL [-----]

- @@global.server_uuid [-----]
- @@global.gtid_executed [-----]
- @@global.gtid_purged [---] binlog [-----] GTID[
- SHOW REPLICA STATUS [Retrieved_Gtid_Set [-----]

[--] source [-----]

```
CHANGE REPLICATION SOURCE TO  
  SOURCE_HOST = '10.0.0.12',  
  SOURCE_PORT = 3306,  
  SOURCE_USER = 'repl',  
  SOURCE_PASSWORD = 'secret',  
  SOURCE_AUTO_POSITION = 1,  
  GET_SOURCE_PUBLIC_KEY = 1  
FOR CHANNEL '';
```

[-----] GTID [-----] binlog [-----]

mysqlrepmon

mariadbmon 连接到 MySQL 数据库

- SHOW REPLICATION STATUS [Source_* / Replica_*]
- server_uuid gtid_executed gtid_purged
- CHANGE REPLICATION SOURCE TO ... SOURCE_AUTO_POSITION=1
- START STOP RESET REPLICATION ... FOR CHANNEL
- super read_only=1
- reset BINARY LOGS AND GTIDS
- enforce_gtid_consistency log_replica_updates

mariadbmon auto_failover auto_rejoin enforce_read_only_slaves switchover failover rejoin

MySQL 8.4 MaxScale

```

+-----+
SQL  --> | MaxScale |
4408 (RW) | readwritesplit |
4409 (RO) | mysqlrepmon |
+-----+
|
GTID
|
+-----+-----+
| | |
+-----V-----+ +-----V-----+ +-----V-----+
| mysql84-a | | mysql84-b | | mysql84-c |
| Primary |----->| Replica | | Replica |
| 10.0.0.11 |----->| 10.0.0.12 | | 10.0.0.13 |
+-----+ +-----+ +-----+
```

primary MaxScale listener readwritesplit MaxScale

MaxScale 连接到 SQL active/passive MaxScale VIP

1. 配置 MySQL 8.4

配置 binlog 格式为 ROW

配置

```
[mysqld]
server_id=101
log_bin=mysql-bin
binlog_format=ROW

gtid_mode=ON
enforce_gtid_consistency=ON
log_replica_updates=ON

relay_log_recovery=ON
```

配置 server_id 为 101 102 103

配置 server_uuid 为 101 102 103

配置 replicas

```
read_only=ON
super_read_only=ON
```

配置 primary

```
read_only=OFF
super_read_only=OFF
```

配置

```
SELECT
  @@hostname,
  @@server_id,
  @@server_uuid,
  @@gtid_mode,
  @@enforce_gtid_consistency,
  @@log_bin,
  @@log_replica_updates,
  @@read_only,
```

```
@@super_read_only\G
```

```
SELECT @@global.gtid_executed\G
```

```
SHOW BINARY LOG STATUS\G
```

```
SHOW REPLICA STATUS\G
```

```
log_bin=1 log_replica_updates=1
```

2. 配置

配置

- 配置
- replicas 配置 binlog 配置
- 配置

配置

配置

```
CREATE USER 'maxscale_mon'@'10.0.0.10'  
  IDENTIFIED BY 'a-long-random-password';
```

```
GRANT REPLICATION CLIENT  
  ON *.* TO 'maxscale_mon'@'10.0.0.10';
```

配置 failover 配置 switchover 配置 rejoin 配置

```
GRANT REPLICATION SLAVE,  
  REPLICATION CLIENT,  
  PROCESS,  
  SUPER,  
  SYSTEM_VARIABLES_ADMIN,  
  REPLICATION_SLAVE_ADMIN,  
  CONNECTION_ADMIN  
  ON *.* TO 'maxscale_mon'@'10.0.0.10';
```

配置 SUPER 配置

配置

```
CREATE USER 'repl'@'10.0.0.%'
  IDENTIFIED BY 'another-long-random-password'
  REQUIRE SSL;

GRANT REPLICATION SLAVE
  ON *.* TO 'repl'@'10.0.0.%';
```

TLS#####ca MySQL 2.4 password #### source GET_SOURCE_PUBLIC_KEY=1 RSA ##### TLS

#####

MaxScale service user ##### MaxScale User Account Manager #### backend #####

```
CREATE USER 'maxscale_route'@'10.0.0.10'
  IDENTIFIED BY 'route-password';

GRANT SELECT ON mysql.user
  TO 'maxscale_route'@'10.0.0.10';
GRANT SELECT ON mysql.db
  TO 'maxscale_route'@'10.0.0.10';
GRANT SELECT ON mysql.tables_priv
  TO 'maxscale_route'@'10.0.0.10';
GRANT SELECT ON mysql.columns_priv
  TO 'maxscale_route'@'10.0.0.10';
GRANT SELECT ON mysql.procs_priv
  TO 'maxscale_route'@'10.0.0.10';
GRANT SELECT ON mysql.proxies_priv
  TO 'maxscale_route'@'10.0.0.10';
GRANT SHOW DATABASES ON *.*
  TO 'maxscale_route'@'10.0.0.10';
```

MySQL ##### MaxScale#####

3. ##### SHA

PR draft MaxScale ##### SHA

```
git clone https://github.com/mariadb-corporation/MaxScale.git
cd MaxScale

git fetch https://github.com/Esysteme/MaxScale.git \
```

```

aurelien/mysql-8.4-replication-support
git checkout --detach f61776a5b19cf295636c94a8a3dea6d81fcd61fb

cmake -S . -B build \
  -DCMAKE_BUILD_TYPE=Release \
  -DCMAKE_INSTALL_PREFIX=/usr/local/maxscale-mysql84

cmake --build build --target mariadbmon mysqlrepmon test_cycle_find -j2
ctest --test-dir build --output-on-failure \
  -R '^test_mariadbmon_cycle_find$'

cmake --build build -j2
sudo cmake --install build

```

```

libmysqlrepmon.so CMake libssh2 LIBSSH2_INCLUDE_DIRS LIBSSH2_INCLUDE_DIR libssh2 target

```

```


```

```

/usr/local/maxscale-mysql84 maxscale.service /usr/bin/maxscale
/etc/systemd/system/maxscale-mysql84.service

```

```

[Unit]
Description=MaxScale MySQL 8.4 compiled build
After=network-online.target
Wants=network-online.target

[Service]
Type=simple
User=maxscale
Group=maxscale
RuntimeDirectory=maxscale
RuntimeDirectoryMode=0755
ExecStart=/usr/local/maxscale-mysql84/bin/maxscale --nodaemon --config=/etc/maxscale.cnf --
logdir=/var/log/maxscale --datadir=/var/lib/maxscale --cachedir=/var/cache/maxscale --
libdir=/usr/local/maxscale-mysql84/lib/maxscale --piddir=/run/maxscale
Restart=on-failure
RestartSec=5s
LimitNOFILE=65535

[Install]
WantedBy=multi-user.target

```

maxscale MaxScale systemd

```
sudo install -d -o maxscale -g maxscale -m 0755 \  
    /var/lib/maxscale /var/cache/maxscale /var/log/maxscale  
sudo systemctl daemon-reload
```

4. MaxScale

```
[maxscale]  
threads=auto  
admin_host=127.0.0.1  
admin_port=8989  
  
[mysql84-a]  
type=server  
address=10.0.0.11  
port=3306  
protocol=MariaDBBackend  
  
[mysql84-b]  
type=server  
address=10.0.0.12  
port=3306  
protocol=MariaDBBackend  
  
[mysql84-c]  
type=server  
address=10.0.0.13  
port=3306  
protocol=MariaDBBackend  
  
[MySQL84-Monitor]  
type=monitor  
module=mysqlrepmon  
servers=mysql84-a,mysql84-b,mysql84-c  
user=maxscale_mon  
password=a-long-random-password  
monitor_interval=2000ms
```

```
assume_unique_hostnames=true
auto_failover=safe
auto_rejoin=true
enforce_read_only_slaves=true

replication_user=repl
replication_password=another-long-random-password
replication_master_ssl=true
```

```
[MySQL84-RW-Service]
type=service
router=readwritesplit
servers=mysql84-a,mysql84-b,mysql84-c
user=maxscale_route
password=route-password
```

```
master_reconnection=true
master_failure_mode=fail_on_write
```

```
[MySQL84-RW-Listener]
type=listener
service=MySQL84-RW-Service
protocol=MariaDBClient
port=4408
```

```
[MySQL84-R0-Service]
type=service
router=readconnroute
servers=mysql84-a,mysql84-b,mysql84-c
user=maxscale_route
password=route-password
router_options=slave
```

```
[MySQL84-R0-Listener]
type=listener
service=MySQL84-R0-Service
protocol=MariaDBClient
port=4409
```

MaxScale [secret]

```

[auto_failover [auto_rejoin [assume_unique_hostnames=true [backend [hostname [private_address [

[auto_failover=safe [

[master_reconnection=true [master_failure_mode=fail_on_write [primary_write_split [primary
failover [

```

5. 配置

配置 MaxScale

```

sudo /usr/local/maxscale-mysql84/bin/maxscale \
  --config=/etc/maxscale.cnf \
  --libdir=/usr/local/maxscale-mysql84/lib/maxscale \
  --config-check

sudo systemctl disable --now maxscale.service 2>/dev/null || true
sudo systemctl enable --now maxscale-mysql84.service
systemctl --no-pager --full status maxscale-mysql84.service

```

验证配置

```

maxctrl list modules | grep -E 'mariadbmon|mysqlrepmon'
maxctrl list servers
maxctrl list monitors
maxctrl show monitor MySQL84-Monitor

```

输出

- Master, Running
- Slave, Running
- Down
- monitor
- listeners 4408 4409

验证 MySQL

```

mysql -h 10.0.0.12 -e "SHOW REPLICA STATUS\G"
mysql -h 10.0.0.13 -e "SHOW REPLICA STATUS\G"

```

|||||

```
Replica_IO_Running: Yes
Replica_SQL_Running: Yes
Seconds_Behind_Source: 0
Auto_Position: 1
```

6. 配置 failover

配置 primary 配置

1. 配置 failcount 配置
2. 配置 replicas 配置
3. 配置
4. 配置 primary read_only
5. 配置 CHANGE REPLICATION SOURCE TO ... SOURCE_AUTO_POSITION=1 配置 replicas
6. 配置
7. 配置 readwritesplit 配置 primary

配置 primary mysqlrepmon 配置

```
SET GLOBAL super_read_only = 1;
```

配置 read_only=1 配置 primary

7. 配置 switchover

配置 switchover

```
maxctrl call command mysqlrepmon switchover \
MySQL84-Monitor mysql84-b mysql84-a
```

|||||

```
maxctrl list servers
```

```
mysql -h 10.0.0.11 -e \
```

```
"SELECT @@hostname, @@read_only, @@super_read_only, @@global.gtid_executed\\G"
mysql -h 10.0.0.12 -e \
"SELECT @@hostname, @@read_only, @@super_read_only, @@global.gtid_executed\\G"
mysql -h 10.0.0.13 -e \
"SELECT @@hostname, @@read_only, @@super_read_only, @@global.gtid_executed\\G"
```

primary super_read_only=1

8. 配置

配置 MaxScale 配置

```
CREATE DATABASE maxscale_ha_test;
CREATE TABLE maxscale_ha_test.events (
  id BIGINT UNSIGNED NOT NULL AUTO_INCREMENT,
  source_hostname VARCHAR(255) NOT NULL,
  created_at TIMESTAMP(6) NOT NULL DEFAULT CURRENT_TIMESTAMP(6),
  PRIMARY KEY (id)
) ENGINE=InnoDB;

INSERT INTO maxscale_ha_test.events(source_hostname)
VALUES (@@hostname);
```

配置 replicas 配置 primary 配置 MaxScale 配置 maintenance 配置

配置

```
watch -n 1 'maxctrl list servers'
```

配置

```
journalctl -u maxscale -f
```

配置

- 配置 primary
- 配置 replicas
- 配置 listener
- 配置

- primary 连接 replica 连接
- `gtid_executed` 连接

MySQL 8.4.10 连接

连接 MySQL 8.4.10 连接

- 连接 primary 连接 replicas
- 连接 primary
- 连接 replica
- 连接 replica 连接 source
- 连接 primary 连接 replica 连接 rejoin
- 连接 failover
- `gtid_executed` 连接
- 连接 MaxScale 连接
- read-only listener 连接

连接 GTID 连接

连接

连接 MaxScale build 连接 `MySQL8.4_sha2_password` 连接

Stored password hash length is 70 when 40 was expected

连接 build 连接 MaxScale 连接 authenticator 连接

`mysql_native_password` probe 连接 `MySQL8.4_sha2_password` 连接 MaxScale build 连接 authenticator 连接 MySQL 连接

连接 REST 连接

401 Unauthorized

连接 `maxctrl` 连接 monitor 连接 SQL 连接

コマンド	パラメータ	MaxScale
<code>SHOW SLAVE STATUS</code>	MariaDB MySQL 8.4	MaxScale
<code>replica</code>	<code>Replica_*</code>	<code>SHOW REPLICA STATUS\G</code>
Replica	<code>log_bin</code> <code>log_replica_updates</code> GTID	monitor
Rejoin	errant	<code>gtid_executed</code> / <code>gtid_purged</code>
<code>Stored password hash</code> <code>length is 70...</code>	authenticator <code>caching_sha2_password</code>	MaxScale plugin
<code>maxctrl 401</code> <code>Unauthorized</code>	REST	MaxScale
	router	<code>master_reconnection</code> <code>master_failure_mode</code> router
primary	fencing/read-only monitor	<code>super_read_only</code>

- `maxscale` CI
- `MaxScale` 配置

Failover 配置

配置示例

- `RPO` primary 配置 replica
- `split-brain`
- `Split-brain` primary fencing
- `multi-source` relay 配置
- `auto_rejoin` errant 配置
- `MaxScale` 配置

配置示例

Checklist

- [] `server_id`
- [] `server_id` `server_uuid`
- [] `GTID` `replica_updates`
- [] `MaxScale` backend `TLS`
- [] `monitor`
- [] `replicas` `read_only=1`
- [] `failover` `switchover`
- [] `MaxScale` 配置
- [] `primary` `rejoin`
- [] `gtid_executed`
- [] `split-brain`
- [] `fencing` `MaxScale`
- [] `GTID` 配置
- [] `split-brain`

目录

MySQL 8.4 LTS 支持 GTID

目录

- mariadbmon MariaDB GTID
- mysqlrepmon MySQL 8.x
- failover
-

MaxScale PR #421 GTID draft MySQL

目录

- MySQL 8.4—
- MySQL 8.4—
- MySQL 8.4—sourceGET_SOURCE_PUBLIC_KEY
- MaxScale—MariaDB Monitor
- MaxScale—readwritesplit router
- Debian 13 MySQL 8.4
- Master/Slave Source/Replica

MaxScale

MySQL 8.4 PR GTID draft

MaxScale PR #421