How to configure GTID-based replication on MySQL servers

Implement GTID replication on MySQL servers

1. Configure a MySQL source server

Include the following options in the /etc/my.cnf.d/mysql-server.cnf file under the [mysqld] section:

bind-address=<source_ip_address>

log_bin=<path_to_source_server_log>

server-id=<id>

gtid_mode=ON

enforce-gtid-consistency=ON

you must restart the mysqld service:

$ sudo systemctl restart mysqld.service

2. Configure a MySQL replica server

Include the following options in the /etc/my.cnf.d/mysql-server.cnf file under the [mysqld] section

log_bin=<path_to_source_server_log>

relay-log=path_to_replica_server_log

server-id=<id>

gtid_mode=ON

enforce-gtid-consistency=ON

log-replica-updates=ON

skip-replica-start=ON

You changed the configuration file on the replica server, so don't forget to restart the mysqld service:

$ sudo systemctl restart mysqld.service

3. Create a replication user on the MySQL source server

Create a replication user:

mysql> CREATE USER 'replication_user'@'replica_server_ip' IDENTIFIED WITH mysql_native_password BY 'password';

Grant the user replication permissions:

mysql> GRANT REPLICATION SLAVE ON *.* TO 'replication_user'@'replica_server_ip';

Reload the grant tables in the MySQL database:

mysql> FLUSH PRIVILEGES;

Set the source server to the read_only state:

mysql> SET @@GLOBAL.read_only = ON;

4. Connect the replica server to the source server

The final piece is to connect the replica server with the source server. These steps are also conducted at the MySQL prompt on the replica server.

Set the replica server to the read_only state:

mysql> SET @@GLOBAL.read_only = ON;

Configure the replication source:

mysql> CHANGE MASTER TO MASTER_HOST = '54.89.xx.xx',MASTER_PORT = 3306, MASTER_USER = 'repl_user', MASTER_PASSWORD = 'XXXXXXXXX', MASTER_AUTO_POSITION = 1;

It is now time to begin the slave process:

start slave;

Start the replica thread in the MySQL replica server:

mysql> START REPLICA;

Step 8: Verifying the Replication Process

The final step is the check your replication process using the given command:

mysql> show slave status /G;

Now unset the read_only state on both servers, and you can make changes to the source server. These changes are sent to the replica:

mysql> SET @@GLOBAL.read_only = OFF;