Group Replication in MySQL

In this documentation, we are going to initiate a group replication with three Linux nodes.

OS details are mentioned below:

OS: Rocky Linux 8

RAM: 2GB

Core: 2

Storage: 50GB

The three nodes and their IPs are mentioned below:

1. Server1 - 1.1.1.1
2. Server2 - 1.1.1.2
3. Server3 - 1.1.1.3

We will now start moving step by step:

- Login into your 1st node (server1) and install mysql (we are using mysql 8.0)

- Apply same on other 2 nodes

- check if the “group\_replication” plugin is installed in mysql on all 3 nodes. (mysql> SHOW PLUGINS;)

- edit mysql-server.cnf file and paste the below mentioned lines:

[mysqld]

datadir=/var/lib/mysql

socket=/var/lib/mysql/mysql.sock

log-error=/var/log/mysql/mysqld.log

pid-file=/run/mysqld/mysqld.pid

bind-address = 0.0.0.0

log\_bin=binlog

log\_slave\_updates=ON

binlog\_format=ROW

master\_info\_repository=TABLE

relay\_log\_info\_repository=TABLE

transaction\_write\_set\_extraction=XXHASH64

disabled\_storage\_engines="MyISAM,BLACKHOLE,FEDERATED,ARCHIVE,MEMORY"

server\_id=1

gtid\_mode=ON

enforce\_gtid\_consistency=ON

report\_host="1.1.1.1" #HOST IP

plugin\_load\_add='group\_replication.so' #PLUGIN

group\_replication\_group\_name="4f84308e-cf89-4133-89c0-f99354bc361c" #UUID (generate one)

group\_replication\_start\_on\_boot=off

group\_replication\_local\_address= "1.1.1.1:33061" #SERVER IP: PORT FOR GR

group\_replication\_ip\_allowlist= "1.1.1.1, 1.1.1.2, 1.1.1.3" #IP’S TO WHITELIST

group\_replication\_group\_seeds= "1.1.1.1:33061, 1.1.1.2:33061, 1.1.1.3:33061" #MEMBERS OF GROUP

group\_replication\_bootstrap\_group= OFF

group\_replication\_single\_primary\_mode= OFF

The configuration file will remain same in all servers, just change the values according to server.

- Now login in mysql and run below mentioned commands on all 3 servers.

mysql> SET SQL\_LOG\_BIN=0;

mysql> CREATE USER *rpl\_user*@'%' IDENTIFIED BY '*password*';

mysql> GRANT REPLICATION SLAVE ON \*.\* TO *rpl\_user*@'%';

mysql> GRANT CONNECTION\_ADMIN ON \*.\* TO *rpl\_user*@'%';

mysql> GRANT BACKUP\_ADMIN ON \*.\* TO *rpl\_user*@'%';

mysql> GRANT GROUP\_REPLICATION\_STREAM ON \*.\* TO *rpl\_user*@'%';

mysql> FLUSH PRIVILEGES;

mysql> CHANGE REPLICATION SOURCE TO SOURCE\_USER='*rpl\_user*',

-> SOURCE\_PASSWORD='*password*'

-> FOR CHANNEL 'group\_replication\_recovery';

mysql> SET SQL\_LOG\_BIN=1;

- On any 1 server login mysql and run below command

mysql> SET GLOBAL group\_replication\_bootstrap\_group=ON;

mysql> START GROUP\_REPLICATION;

mysql> SET GLOBAL group\_replication\_bootstrap\_group=OFF;

- On the other 2 servers run below mentioned command

mysql> START GROUP\_REPLICATION;

- Check if replication is working or not

mysql> SELECT \* FROM performance\_schema.replication\_group\_members;

You will see all 3 nodes and their status in MySQL.

The family group has been created….

Happy Ending…..