목차

MariaDB 10, MHA Replication 구성 3
사전 준비 환경 3
기본 패키지 설치 (모든 서버에서) 3
MariaDB Master / Slave 구성 3
MHA 설치 6
설정 확인 9
Slave IP <=> Master IP 변경 스크립트 설정 9
Failover 스크립트 설정 11
참조링크 12

MariaDB 10, MHA Replication 구성

사전 준비 환경

- CentOS 7 + MariaDB 10.2 + MHA 0.57 조합으로 구성
- 서버 (3개), ip는 vip로 구성해도 될 것으로 보임.

노드	IP	Role
MHA Manager Server	192.168.0.150	(mgr)
Master DB Server	192.168.0.151	(masterdb)
Slave DB Server	192.168.0.152	(slavedb01)

- 방화벽 3306 포트 개방
- 모든 서버에 MariaDB 10.2 설치

기본 패키지 설치 (모든 서버에서)

- 필요 패키지 설치

```
yum install epel-release -y
yum install net-tools sysstat wget lrzsz lsof htop iftop rsync bzip2 unzip
patch syslog -y
```

- MHA 관련

```
yum -y install epel perl-devel perl-CPAN perl-DBD-MySQL perl-Config-Tiny
perl-Log-Dispatch perl-Parallel-ForkManager perl-Module-Install
```

MariaDB Master / Slave 구성

- DB 실행(Master,Slave)

```
service mysql start
```

- root 패스워드 변경(Master,Slave)

```
mysql_secure_installation

  Enter current password for root (enter for none): enter
  Set root password? [Y/n] y
  Remove anonymous users? [Y/n] y
  Disallow root login remotely? [Y/n] n
```

```
  Remove test database and access to it? [Y/n] n
  Reload privilege tables now? [Y/n] y
```

- root 접속 테스트(Master,Slave)

```
shell >> mysql -uroot -p

mysql >> show global variables like '%dir%';

  base: /usr
  datadir: /var/lib/mysql/
```

- Replication 유저 생성(Master,Slave)

```
create user 'rep'@'%' identified by 'rep';
grant replication slave on *.* to 'rep';
flush privileges;
```

- MHA 유저 생성(Master,Slave)

```
grant all privileges on *.* to 'mha'@'%' identified by 'mha';
flush privileges;
```

- 설정 위해 DB 종료(Master,Slave)

```
mysql >> exit

shell >> service mysql stop
```

- 환경변수 설정

```
vi /etc/my.cnf.d/server.cnf

# Master DB Server에서
[mariadb]
server_id=1
log-bin=mysql-bin

# Slave DB Server에서
[mariadb]
server_id=2
log-bin=mysql-bin
read_only=1
relay_log_purge=0
```

- 다시 DB 실행(Master,Slave)

```
service mysql start
```

- Master 서버에서 로그 파일과 위치 확인(Master)

```
show master status;
```

```
MariaDB [(none)]> show master status;
+------------------+----------+--------------+------------------+
| File             | Position | Binlog_Do_DB | Binlog_Ignore_DB |
+------------------+----------+--------------+------------------+
| mysql-bin.000005 |      342 |              |                  |
+------------------+----------+--------------+------------------+
1 row in set (0.00 sec)
```

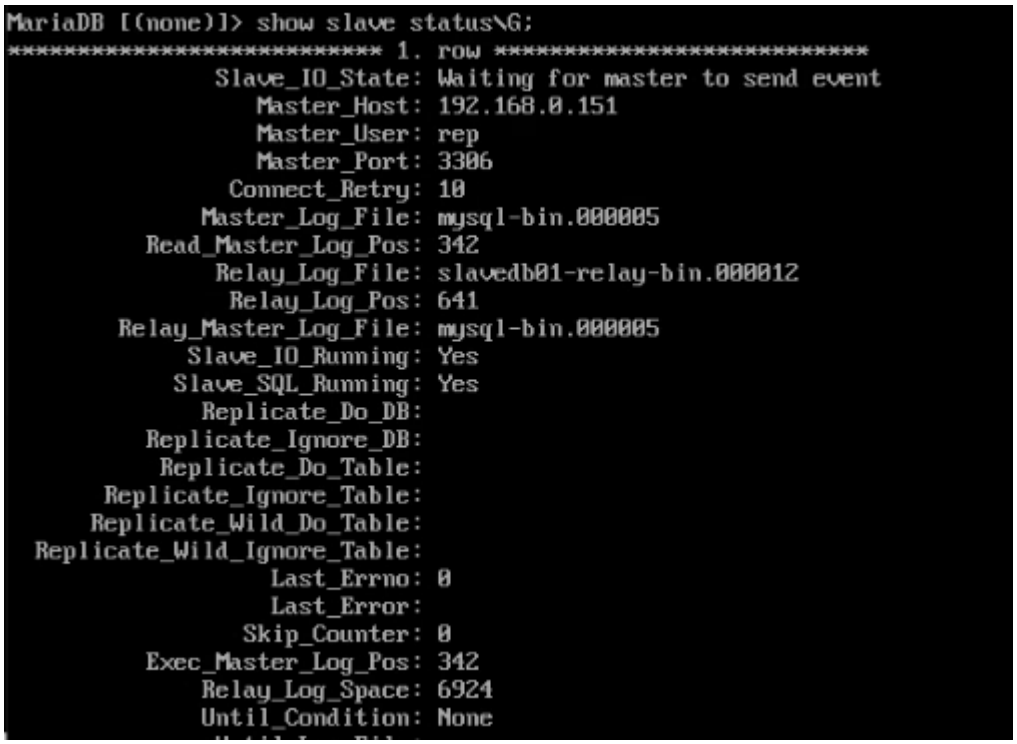
- Slave 서버에서 Replication 세팅(Slave)

```
change master to
master_host='192.168.0.151',
master_user='rep',
master_password='rep',
master_port=3306,
master_log_file='mysql-bin.000005',
master_log_pos=342,
master_connect_retry=10;

start slave;

show slave status\G;
```

Slave_IO_State, Slave_IO_Running, Slave_SQL_Running이 다음과 같은 상태여야 함.



- 실제로 Replication이 동작하는지 Master 서버에서 데이터베이스와 테이블 생성하고 Slave에도 생성되었는지 확인

MHA 설치

- MHA 프로그램이 사용할 디렉토리 생성 (모든 서버)

```
mkdir /mha
```

- MHA 유저 생성 (모든 서버)

```
useradd -g mysql -d /home/mhauser -m -s /bin/bash mhauser

passwd mhauser
mhauser

chown -R mhauser:mysql /mha
```

- MHA node 설치 (모든 서버)

```
mkdir /source
cd /source

wget http://cliel.com/data/mha4mysql-node-0.57.tar.gz
tar xvzf mha4mysql-node-0.57.tar.gz
```

```
cd /source/mha4mysql-node-0.57
perl Makefile.PL
make
make install
```

- MHA Manager 설치 (MHA Manager 서버)

```
cpan YAML
perl -MCPAN -e "install File::Remove"
perl -MCPAN -e "install Build"
perl -MCPAN -e "install Module::Install"
perl -MCPAN -e "install Net::Telnet"
perl -MCPAN -e "install Log::Dispatch"

cd /source
wget http://cliel.com/data/mha4mysql-manager-0.57.tar.gz
tar xvzf mha4mysql-manager-0.57.tar.gz

cd /source/mha4mysql-manager-0.57
perl Makefile.PL
make
make install
```

- SSH 연결. MHA 모니터링과 Failover를 수행하기 위해선 각각의 서버들이 서로 간에 비밀번호 없이 SSH 접속할 수 있어야 함.(모든서버)

```
visudo

# 맨 아래에 추가
mhauser ALL = (ALL) NOPASSWD:/sbin/ifconfig
```

각 서버에서 다른 서버들에게 공개키를 줘야 함. (MHA Manager → Master DB, Slave DB / Master DB → Slave DB, MHA Manager / Slave DB → MasterDB, MHA Manager)

```
키 생성 :
    su - mhauser
    ssh-keygen -t rsa [엔터 3번]

키 복사 :
    ssh-copy-id -i ~/.ssh/id_rsa.pub mhauser@192.168.56.151
    ssh-copy-id -i ~/.ssh/id_rsa.pub mhauser@192.168.56.152

연결 테스트 :
    ssh 192.168.56.151
    ssh 192.168.56.152
```

- 파일의 내용이 변경되지 않도록 권한 수정(모든 서버)

```
su - mhauser
cd .ssh
chmod 400 authorized_keys
```

- MHA Manager 명령어 커스텀마이징(MHA Manager 서버)

```
vi .bash_profile 에 아래 내용 추가

set -o vi
alias sshcheck='/usr/local/bin/masterha_check_ssh --conf=/etc/mha.cnf'
alias replcheck='/usr/local/bin/masterha_check_repl --conf=/etc/mha.cnf'
alias start='/usr/local/bin/masterha_manager --conf=/etc/mha.cnf &'
alias stop='/usr/local/bin/masterha_stop --conf=/etc/mha.cnf'
alias status='/usr/local/bin/masterha_check_status --conf=/etc/mha.cnf'
alias log='tail -f /mha/manager.log'

저장 후
source .bash_profile
```

- MHA 사용할 config 파일 생성(MHA Manager 서버)

```
cp /source/mha4mysql-manager-0.57/samples/conf/app1.cnf /etc/mha.cnf

vi /etc/mha.cnf

[server default]
user=mha
password=mha1122

ssh_user=mhauser

repl_user=rep
repl_password=rep1122

manager_workdir=/mha
manager_log=/mha/manager.log
remote_workdir=/mha

master_binlog_dir=/var/lib/mysql

[server1]
hostname=192.168.0.151
candidate_master=1

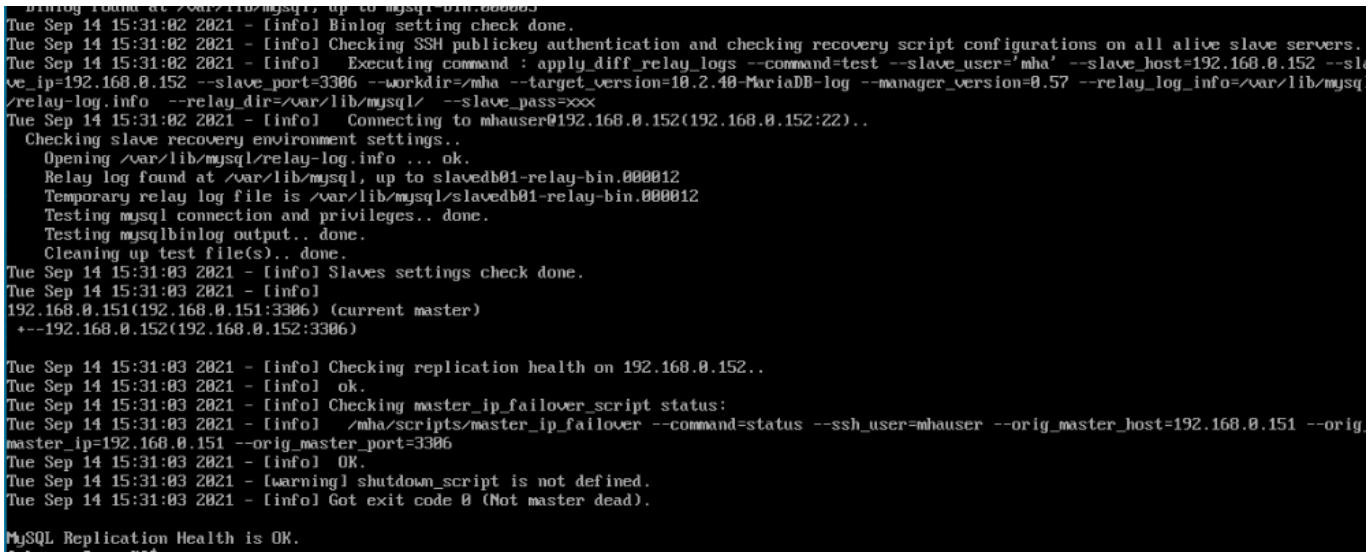
[server2]
hostname=192.168.0.152
candidate_master=1
```

설정 확인

```
sshcheck
```




```
replcheck
```



Slave IP <=> Master IP 변경 스크립트 설정

```
mkdir /mha/scripts

cp /source/mha4mysql-manager-0.57/samples/scripts/master_ip_online_change
/mha/scripts/master_ip_online_change
```

- vi /mha/scripts/master_ip_online_change 수정

150, 151, 152, 245, 246, 247, 248 라인에 주석 추가

```
:set number
:150
```

```
    149       ## Drop application user so that nobody can connect. Disabling
per-session binlog beforehand
    150       # $orig_master_handler->disable_log_bin_local();
    151       # print current_time_us() . " Drpping app user on the orig
master..\n";
    152       # FIXME_xxx_drop_app_user($orig_master_handler);

:245

    244       ## Creating an app user on the new master
    245       # print current_time_us() . " Creating app user on the new
master..\n";
    246       # FIXME_xxx_create_app_user($new_master_handler);
    247       # $new_master_handler->enable_log_bin_local();
    248       # $new_master_handler->disconnect();
```

- vi `/etc/mha.cnf` 수정 (master_ip_online_change 파일 경로 추가)

```


[server default]
user=mha
password=mha

ssh_user=mhauser

repl_user=rep
repl_password=rep1122

manager_workdir=/mha
manager_log=/mha/manager.log

remote_workdir=/mha

master_binlog_dir=/var/lib/mysql

master_ip_online_change_script=/mha/scripts/master_ip_online_change

[server1]
hostname=192.168.0.151
candidate_master=1

[server2]
hostname=192.168.0.152
candidate_master=1
```

Failover 스크립트 설정

```
cp /source/mha4mysql-manager-0.57/samples/scripts/master_ip_failover
/mha/scripts/
```

- vi /mha/scripts/master_ip_failover 수정

87, 88, 89, 90, 93 라인 주석 처리

```
:set number
:87

     86       ## Creating an app user on the new master
     87       # print "Creating app user on the new master..\n";
     88       # FIXME_xxx_create_user( $new_master_handler->{dbh} );
     89       # $new_master_handler->enable_log_bin_local();
     90       # $new_master_handler->disconnect();
     91
     92       ## Update master ip on the catalog database, etc
     93       # FIXME_xxx;
```

- vi /etc/mha.cnf 수정 (Failover 스크립트 설정)

```
[server default]
user=mha
password=mha1122

ssh_user=mhauser

repl_user=rep
repl_password=rep1122

manager_workdir=/mha

manager_log=/mha/manager.log

remote_workdir=/mha

master_binlog_dir=/var/lib/mysql

master_ip_online_change_script=/mha/scripts/master_ip_online_change
master_ip_failover_script=/mha/scripts/master_ip_failover

[server1]
hostname=192.168.0.151
candidate_master=1
```

```
[server2]
hostname=192.168.0.152
candidate_master=1
```

참조링크

- https://onestone-note.tistory.com/34

From:
https://atl.kr/dokuwiki/ - **AllThatLinux!**

Permanent link:
https://atl.kr/dokuwiki/doku.php/mariadb_10_mha_replication_%EA%B5%AC%EC%84%B1

Last update: **2022/10/13 07:05**