MySQL Master – Slave Replication

1   Server Information

Private IP	99.88.0.96	99.88.0.81
Public IP	138.2.105.93	152.69.210.93
Hostname	mysqlcirebon	mysqlmojokerto
OS Version	Oracle Linux Server 8.8	Oracle Linux Server 8.8
Hypervisor vendor	KVM	KVM
CPU Threads	2	2
RAM in GB	15.32	15.32
SWAP in GB	4	4
MySQL Version	8.0.32 Community	8.0.32 Community

2   Edit hosts

```
[miiadm@mysqlcirebon ~]$ sudo vi /etc/hosts; cat /etc/hosts;
127.0.0.1   localhost localhost.localdomain localhost4 localhost4.localdomain4
::1         localhost localhost.localdomain localhost6 localhost6.localdomain6
99.88.0.96  mysqlcirebon.sub07280429360.vcnmii.oraclevcn.com    mysqlcirebon
99.88.0.81  mysqlmojokerto.sub07280429360.vcnmii.oraclevcn.com  mysqlmojokerto
[miiadm@mysqlcirebon ~]$

[miiadm@mysqlmojokerto ~]$ sudo vi /etc/hosts; cat /etc/hosts;
127.0.0.1   localhost localhost.localdomain localhost4 localhost4.localdomain4
::1         localhost localhost.localdomain localhost6 localhost6.localdomain6
99.88.0.96  mysqlcirebon.sub07280429360.vcnmii.oraclevcn.com    mysqlcirebon
99.88.0.81  mysqlmojokerto.sub07280429360.vcnmii.oraclevcn.com  mysqlmojokerto
[miiadm@mysqlmojokerto ~]$
```

3   MySQL Software Installation

```
[miiadm@mysqlcirebon ~]$ sudo dnf install -y mysql-server
Last metadata expiration check: 1:51:46 ago on Fri 14 Jul 2023 05:04:11 AM GMT.
Dependencies resolved.
===============================================================================
======
 Package                   Arch       Version                               Repository
Size
===============================================================================
======
Installing:
 mysql-server              x86_64     8.0.32-1.module+el8.8.0+21055+76bd398b    ol8_appstream
32 M
Installing dependencies:
 mariadb-connector-c-config   noarch   3.1.11-2.el8_3                        ol8_appstream
15 k
 mecab                     x86_64     0.996-2.module+el8.8.0+21055+76bd398b    ol8_appstream
394 k
 mysql                     x86_64     8.0.32-1.module+el8.8.0+21055+76bd398b    ol8_appstream
15 M
 mysql-common              x86_64     8.0.32-1.module+el8.8.0+21055+76bd398b    ol8_appstream
137 k
 mysql-errmsg              x86_64     8.0.32-1.module+el8.8.0+21055+76bd398b    ol8_appstream
629 k
 protobuf-lite             x86_64     3.5.0-15.el8                          ol8_appstream
149 k
```

```
Enabling module streams:
 mysql                                    8.0

Transaction Summary
========================================================================================
======
Install  7 Packages

Total download size: 48 M
Installed size: 245 M
Downloading Packages:
(1/7): mecab-0.996-2.module+el8.8.0+21055+76bd398b.x86_64.rpm                3.4 MB/s | 394 kB
00:00
(2/7): mariadb-connector-c-config-3.1.11-2.el8_3.noarch.rpm                   84 kB/s |  15 kB
00:00
(3/7): mysql-common-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64.rpm        1.5 MB/s | 137 kB
00:00
(4/7): mysql-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64.rpm                39 MB/s |  15 MB
00:00
(5/7): mysql-errmsg-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64.rpm        2.9 MB/s | 629 kB
00:00
(6/7): protobuf-lite-3.5.0-15.el8.x86_64.rpm                                 2.0 MB/s | 149 kB
00:00
(7/7): mysql-server-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64.rpm         37 MB/s |  32 MB
00:00
----------------------------------------------------------------------------------------
------
Total                                                                         45 MB/s |  48 MB
00:01
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing        :
1/1
  Installing       : mariadb-connector-c-config-3.1.11-2.el8_3.noarch
1/7
  Installing       : mysql-common-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
2/7
  Installing       : mysql-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
3/7
  Installing       : mysql-errmsg-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
4/7
  Installing       : protobuf-lite-3.5.0-15.el8.x86_64
5/7
  Installing       : mecab-0.996-2.module+el8.8.0+21055+76bd398b.x86_64
6/7
  Running scriptlet: mecab-0.996-2.module+el8.8.0+21055+76bd398b.x86_64
6/7
  Running scriptlet: mysql-server-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
7/7
  Installing       : mysql-server-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
7/7
  Running scriptlet: mysql-server-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
7/7
ValueError: File context for /var/log/mysql(/.*)? already defined

  Verifying        : mariadb-connector-c-config-3.1.11-2.el8_3.noarch
1/7
  Verifying        : mecab-0.996-2.module+el8.8.0+21055+76bd398b.x86_64
2/7
  Verifying        : mysql-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
3/7
  Verifying        : mysql-common-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
4/7
  Verifying        : mysql-errmsg-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
5/7
  Verifying        : mysql-server-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
6/7
  Verifying        : protobuf-lite-3.5.0-15.el8.x86_64
7/7

Installed:
  mariadb-connector-c-config-3.1.11-2.el8_3.noarch
  mecab-0.996-2.module+el8.8.0+21055+76bd398b.x86_64
  mysql-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
  mysql-common-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
```

```
    mysql-errmsg-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
    mysql-server-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
    protobuf-lite-3.5.0-15.el8.x86_64

Complete!
[miiadm@mysqlcirebon ~]$ sudo dnf info mysql-server
Last metadata expiration check: 1:52:46 ago on Fri 14 Jul 2023 05:04:11 AM GMT.
Installed Packages
Name         : mysql-server
Version      : 8.0.32
Release      : 1.module+el8.8.0+21055+76bd398b
Architecture : x86_64
Size         : 159 M
Source       : mysql-8.0.32-1.module+el8.8.0+21055+76bd398b.src.rpm
Repository   : @System
From repo    : ol8_appstream
Summary      : The MySQL server and related files
URL          : http://www.mysql.com
License      : GPLv2 with exceptions and LGPLv2 and BSD
Description  : MySQL is a multi-user, multi-threaded SQL database server. MySQL is a
             : client/server implementation consisting of a server daemon (mysqld)
             : and many different client programs and libraries. This package contains
             : the MySQL server and some accompanying files and directories.

[miiadm@mysqlcirebon ~]$

[miiadm@mysqlmojokerto ~]$ sudo dnf install -y mysql-server
Last metadata expiration check: 1:53:40 ago on Fri 14 Jul 2023 05:02:17 AM GMT.
Dependencies resolved.
==================================================================================================
======
 Package                     Arch      Version                                        Repository
Size
==================================================================================================
======
Installing:
 mysql-server                x86_64    8.0.32-1.module+el8.8.0+21055+76bd398b         ol8_appstream
32 M
Installing dependencies:
 mariadb-connector-c-config  noarch    3.1.11-2.el8_3                                 ol8_appstream
15 k
 mecab                       x86_64    0.996-2.module+el8.8.0+21055+76bd398b          ol8_appstream
394 k
 mysql                       x86_64    8.0.32-1.module+el8.8.0+21055+76bd398b         ol8_appstream
15 M
 mysql-common                x86_64    8.0.32-1.module+el8.8.0+21055+76bd398b         ol8_appstream
137 k
 mysql-errmsg                x86_64    8.0.32-1.module+el8.8.0+21055+76bd398b         ol8_appstream
629 k
 protobuf-lite               x86_64    3.5.0-15.el8                                   ol8_appstream
149 k
Enabling module streams:
 mysql                                 8.0

Transaction Summary
==================================================================================================
======
Install  7 Packages

Total download size: 48 M
Installed size: 245 M
Downloading Packages:
(1/7): mecab-0.996-2.module+el8.8.0+21055+76bd398b.x86_64.rpm                     2.7 MB/s | 394 kB
00:00
(2/7): mariadb-connector-c-config-3.1.11-2.el8_3.noarch.rpm                        92 kB/s |  15 kB
00:00
(3/7): mysql-common-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64.rpm             1.4 MB/s | 137 kB
00:00
(4/7): mysql-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64.rpm                      34 MB/s |  15 MB
00:00
(5/7): mysql-errmsg-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64.rpm             2.2 MB/s | 629 kB
00:00
(6/7): protobuf-lite-3.5.0-15.el8.x86_64.rpm                                       2.4 MB/s | 149 kB
00:00
(7/7): mysql-server-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64.rpm               34 MB/s |  32 MB
00:00
--------------------------------------------------------------------------------------------------
------
```

```
Total                                                                 40 MB/s |  48 MB
00:01
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing        :
1/1
  Installing       : mariadb-connector-c-config-3.1.11-2.el8_3.noarch
1/7
  Installing       : mysql-common-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
2/7
  Installing       : mysql-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
3/7
  Installing       : mysql-errmsg-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
4/7
  Installing       : protobuf-lite-3.5.0-15.el8.x86_64
5/7
  Installing       : mecab-0.996-2.module+el8.8.0+21055+76bd398b.x86_64
6/7
  Running scriptlet: mecab-0.996-2.module+el8.8.0+21055+76bd398b.x86_64
6/7
  Running scriptlet: mysql-server-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
7/7
  Installing       : mysql-server-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
7/7
  Running scriptlet: mysql-server-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
7/7
ValueError: File context for /var/log/mysql(/.*)? already defined

  Verifying        : mariadb-connector-c-config-3.1.11-2.el8_3.noarch
1/7
  Verifying        : mecab-0.996-2.module+el8.8.0+21055+76bd398b.x86_64
2/7
  Verifying        : mysql-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
3/7
  Verifying        : mysql-common-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
4/7
  Verifying        : mysql-errmsg-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
5/7
  Verifying        : mysql-server-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
6/7
  Verifying        : protobuf-lite-3.5.0-15.el8.x86_64
7/7

Installed:
  mariadb-connector-c-config-3.1.11-2.el8_3.noarch
  mecab-0.996-2.module+el8.8.0+21055+76bd398b.x86_64
  mysql-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
  mysql-common-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
  mysql-errmsg-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
  mysql-server-8.0.32-1.module+el8.8.0+21055+76bd398b.x86_64
  protobuf-lite-3.5.0-15.el8.x86_64

Complete!
[miiadm@mysqlmojokerto ~]$ sudo dnf info mysql-server
Last metadata expiration check: 1:54:40 ago on Fri 14 Jul 2023 05:02:17 AM GMT.
Installed Packages
Name         : mysql-server
Version      : 8.0.32
Release      : 1.module+el8.8.0+21055+76bd398b
Architecture : x86_64
Size         : 159 M
Source       : mysql-8.0.32-1.module+el8.8.0+21055+76bd398b.src.rpm
Repository   : @System
From repo    : ol8_appstream
Summary      : The MySQL server and related files
URL          : http://www.mysql.com
License      : GPLv2 with exceptions and LGPLv2 and BSD
Description  : MySQL is a multi-user, multi-threaded SQL database server. MySQL is a
             : client/server implementation consisting of a server daemon (mysqld)
             : and many different client programs and libraries. This package contains
             : the MySQL server and some accompanying files and directories.

[miiadm@mysqlmojokerto ~]$
```

4   Disable selinux

```
[miiadm@mysqlcirebon ~]$ sudo vi /etc/selinux/config; cat /etc/selinux/config;

# This file controls the state of SELinux on the system.
# SELINUX= can take one of these three values:
#     enforcing - SELinux security policy is enforced.
#     permissive - SELinux prints warnings instead of enforcing.
#     disabled - No SELinux policy is loaded.
SELINUX=disabled
# SELINUXTYPE= can take one of these three values:
#     targeted - Targeted processes are protected,
#     minimum - Modification of targeted policy. Only selected processes are protected.
#     mls - Multi Level Security protection.
SELINUXTYPE=targeted


[miiadm@mysqlcirebon ~]$ sudo setenforce 0
[miiadm@mysqlcirebon ~]$ sudo getenforce
Permissive
[miiadm@mysqlcirebon ~]$

[miiadm@mysqlmojokerto ~]$ sudo vi /etc/selinux/config; cat /etc/selinux/config;

# This file controls the state of SELinux on the system.
# SELINUX= can take one of these three values:
#     enforcing - SELinux security policy is enforced.
#     permissive - SELinux prints warnings instead of enforcing.
#     disabled - No SELinux policy is loaded.
SELINUX=disabled
# SELINUXTYPE= can take one of these three values:
#     targeted - Targeted processes are protected,
#     minimum - Modification of targeted policy. Only selected processes are protected.
#     mls - Multi Level Security protection.
SELINUXTYPE=targeted


[miiadm@mysqlmojokerto ~]$ sudo setenforce 0
[miiadm@mysqlmojokerto ~]$ sudo getenforce
Permissive
[miiadm@mysqlmojokerto ~]$
```

5   Create /mysqldata Directory

```
[miiadm@mysqlcirebon ~]$ sudo mkdir -p /mysqldata
[miiadm@mysqlcirebon ~]$ sudo mkdir -p /mysqldata/log_bin
[miiadm@mysqlcirebon ~]$ sudo mkdir -p /mysqldata/tmpdir
[miiadm@mysqlcirebon ~]$ sudo mkdir -p /mysqldata/mysql
[miiadm@mysqlcirebon ~]$ sudo chown -R mysql:mysql /mysqldata;
[miiadm@mysqlcirebon ~]$

[miiadm@mysqlmojokerto ~]$ sudo mkdir -p /mysqldata
[miiadm@mysqlmojokerto ~]$ sudo mkdir -p /mysqldata/log_bin
[miiadm@mysqlmojokerto ~]$ sudo mkdir -p /mysqldata/tmpdir
[miiadm@mysqlmojokerto ~]$ sudo mkdir -p /mysqldata/mysql
[miiadm@mysqlmojokerto ~]$ sudo chown -R mysql:mysql /mysqldata;
[miiadm@mysqlmojokerto ~]$
```

6   Backup Original my.cnf

```
[miiadm@mysqlcirebon ~]$ sudo rsync -vrah /etc/my.cnf /etc/my_20230714.cnf
sending incremental file list
my.cnf

sent 288 bytes  received 35 bytes  646.00 bytes/sec
total size is 202  speedup is 0.63
[miiadm@mysqlcirebon ~]$

[miiadm@mysqlmojokerto ~]$ sudo rsync -vrah /etc/my.cnf /etc/my_20230714.cnf
sending incremental file list
my.cnf
```

```
sent 288 bytes  received 35 bytes  646.00 bytes/sec
total size is 202  speedup is 0.63
[miiadm@mysqlmojokerto ~]$
```

7 Edit Parameter File

```
[miiadm@mysqlcirebon ~]$ sudo vi /etc/my.cnf.d/mysql-server.cnf
[miiadm@mysqlcirebon ~]$ cat /etc/my.cnf.d/mysql-server.cnf
#
# This group are read by MySQL server.
# Use it for options that only the server (but not clients) should see
#
# For advice on how to change settings please see
# http://dev.mysql.com/doc/refman/en/server-configuration-defaults.html

# Settings user and group are ignored when systemd is used.
# If you need to run mysqld under a different user or group,
# customize your systemd unit file for mysqld according to the
# instructions in http://fedoraproject.org/wiki/Systemd

[mysqld]
#datadir=/var/lib/mysql
socket=/var/lib/mysql/mysql.sock
#log-error=/var/log/mysql/mysqld.log
pid-file=/run/mysqld/mysqld.pid
user=mysql
tmpdir=/mysqldata/tmpdir
datadir=/mysqldata/mysql
log-error=/mysqldata/mysql/mysqld.log
log-bin=/mysqldata/log_bin
server-id=98
default-storage-engine=InnoDB

[miiadm@mysqlcirebon ~]$

[miiadm@mysqlmojokerto ~]$ sudo vi /etc/my.cnf.d/mysql-server.cnf
[miiadm@mysqlmojokerto ~]$ cat /etc/my.cnf.d/mysql-server.cnf
#
# This group are read by MySQL server.
# Use it for options that only the server (but not clients) should see
#
# For advice on how to change settings please see
# http://dev.mysql.com/doc/refman/en/server-configuration-defaults.html

# Settings user and group are ignored when systemd is used.
# If you need to run mysqld under a different user or group,
# customize your systemd unit file for mysqld according to the
# instructions in http://fedoraproject.org/wiki/Systemd

[mysqld]
#datadir=/var/lib/mysql
socket=/var/lib/mysql/mysql.sock
#log-error=/var/log/mysql/mysqld.log
pid-file=/run/mysqld/mysqld.pid
user=mysql
tmpdir=/mysqldata/tmpdir
datadir=/mysqldata/mysql
log-error=/mysqldata/mysql/mysqld.log
log-bin=/mysqldata/log_bin
server-id=99
default-storage-engine=InnoDB

[miiadm@mysqlmojokerto ~]$
```

8 Start mysqld

```
[miiadm@mysqlcirebon ~]$ sudo systemctl start mysqld
[miiadm@mysqlcirebon ~]$ sudo systemctl status mysqld
● mysqld.service - MySQL 8.0 database server
   Loaded: loaded (/usr/lib/systemd/system/mysqld.service; disabled; vendor preset: disabled)
   Active: active (running) since Fri 2023-07-14 08:15:33 GMT; 1min 10s ago
```

```
    Process: 107135 ExecStopPost=/usr/libexec/mysql-wait-stop (code=exited, status=0/SUCCESS)
    Process: 107332 ExecStartPost=/usr/libexec/mysql-check-upgrade (code=exited, status=0/SUCCESS)
    Process: 107246 ExecStartPre=/usr/libexec/mysql-prepare-db-dir mysqld.service (code=exited,
status=0/SUCCESS)
    Process: 107221 ExecStartPre=/usr/libexec/mysql-check-socket (code=exited, status=0/SUCCESS)
 Main PID: 107284 (mysqld)
    Status: "Server is operational"
     Tasks: 38 (limit: 99872)
    Memory: 375.6M
    CGroup: /system.slice/mysqld.service
            └─107284 /usr/libexec/mysqld --basedir=/usr

Jul 14 08:15:32 mysqlcirebon systemd[1]: Starting MySQL 8.0 database server...
Jul 14 08:15:33 mysqlcirebon systemd[1]: Started MySQL 8.0 database server.
[miiadm@mysqlcirebon ~]$

[miiadm@mysqlmojokerto ~]$ sudo systemctl start mysqld
[miiadm@mysqlmojokerto ~]$ sudo systemctl status mysqld
● mysqld.service - MySQL 8.0 database server
    Loaded: loaded (/usr/lib/systemd/system/mysqld.service; disabled; vendor preset: disabled)
    Active: active (running) since Fri 2023-07-14 08:15:33 GMT; 1min 10s ago
   Process: 107231 ExecStopPost=/usr/libexec/mysql-wait-stop (code=exited, status=0/SUCCESS)
   Process: 107443 ExecStartPost=/usr/libexec/mysql-check-upgrade (code=exited, status=0/SUCCESS)
   Process: 107359 ExecStartPre=/usr/libexec/mysql-prepare-db-dir mysqld.service (code=exited,
status=0/SUCCESS)
   Process: 107333 ExecStartPre=/usr/libexec/mysql-check-socket (code=exited, status=0/SUCCESS)
 Main PID: 107396 (mysqld)
    Status: "Server is operational"
     Tasks: 38 (limit: 99872)
    Memory: 373.5M
    CGroup: /system.slice/mysqld.service
            └─107396 /usr/libexec/mysqld --basedir=/usr

Jul 14 08:15:32 mysqlmojokerto systemd[1]: Starting MySQL 8.0 database server...
Jul 14 08:15:33 mysqlmojokerto systemd[1]: Started MySQL 8.0 database server.
[miiadm@mysqlmojokerto ~]$
```

9   Open Port MySQL

```
[miiadm@mysqlcirebon ~]$ sudo firewall-cmd --zone=public --add-port=3306/tcp --permanent
success
[miiadm@mysqlcirebon ~]$ sudo firewall-cmd --reload
success
[miiadm@mysqlcirebon ~]$

[miiadm@mysqlmojokerto ~]$ sudo firewall-cmd --zone=public --add-port=3306/tcp --permanent
success
[miiadm@mysqlmojokerto ~]$ sudo firewall-cmd --reload
success
[miiadm@mysqlmojokerto ~]$
```

10 Securing Initial MySQL

```
[miiadm@mysqlcirebon ~]$ sudo mysql_secure_installation

Securing the MySQL server deployment.

Connecting to MySQL using a blank password.

VALIDATE PASSWORD COMPONENT can be used to test passwords
and improve security. It checks the strength of password
and allows the users to set only those passwords which are
secure enough. Would you like to setup VALIDATE PASSWORD component?

Press y|Y for Yes, any other key for No: Y

There are three levels of password validation policy:

LOW    Length >= 8
MEDIUM Length >= 8, numeric, mixed case, and special characters
STRONG Length >= 8, numeric, mixed case, special characters and dictionary          file
```

```
Please enter 0 = LOW, 1 = MEDIUM and 2 = STRONG: 1
Please set the password for root here.

New password: HEYtayo#789

Re-enter new password: HEYtayo#789

Estimated strength of the password: 100
Do you wish to continue with the password provided?(Press y|Y for Yes, any other key for No) : Y
By default, a MySQL installation has an anonymous user,
allowing anyone to log into MySQL without having to have
a user account created for them. This is intended only for
testing, and to make the installation go a bit smoother.
You should remove them before moving into a production
environment.

Remove anonymous users? (Press y|Y for Yes, any other key for No) : Y
Success.


Normally, root should only be allowed to connect from
'localhost'. This ensures that someone cannot guess at
the root password from the network.

Disallow root login remotely? (Press y|Y for Yes, any other key for No) : Y
Success.

By default, MySQL comes with a database named 'test' that
anyone can access. This is also intended only for testing,
and should be removed before moving into a production
environment.


Remove test database and access to it? (Press y|Y for Yes, any other key for No) : N

 ... skipping.
Reloading the privilege tables will ensure that all changes
made so far will take effect immediately.

Reload privilege tables now? (Press y|Y for Yes, any other key for No) : Y
Success.

All done!
[miiadm@mysqlcirebon ~]$

[miiadm@mysqlmojokerto ~]$ sudo mysql_secure_installation

Securing the MySQL server deployment.

Connecting to MySQL using a blank password.

VALIDATE PASSWORD COMPONENT can be used to test passwords
and improve security. It checks the strength of password
and allows the users to set only those passwords which are
secure enough. Would you like to setup VALIDATE PASSWORD component?

Press y|Y for Yes, any other key for No: Y

There are three levels of password validation policy:

LOW    Length >= 8
MEDIUM Length >= 8, numeric, mixed case, and special characters
STRONG Length >= 8, numeric, mixed case, special characters and dictionary                file

Please enter 0 = LOW, 1 = MEDIUM and 2 = STRONG: 1
Please set the password for root here.

New password: HEYtayo#789

Re-enter new password: HEYtayo#789

Estimated strength of the password: 100
Do you wish to continue with the password provided?(Press y|Y for Yes, any other key for No) : Y
By default, a MySQL installation has an anonymous user,
allowing anyone to log into MySQL without having to have
a user account created for them. This is intended only for
testing, and to make the installation go a bit smoother.
You should remove them before moving into a production
```

```
environment.

Remove anonymous users? (Press y|Y for Yes, any other key for No) : Y
Success.


Normally, root should only be allowed to connect from
'localhost'. This ensures that someone cannot guess at
the root password from the network.

Disallow root login remotely? (Press y|Y for Yes, any other key for No) : Y
Success.

By default, MySQL comes with a database named 'test' that
anyone can access. This is also intended only for testing,
and should be removed before moving into a production
environment.


Remove test database and access to it? (Press y|Y for Yes, any other key for No) : N

 ... skipping.
Reloading the privilege tables will ensure that all changes
made so far will take effect immediately.

Reload privilege tables now? (Press y|Y for Yes, any other key for No) : Y
Success.

All done!
[miiadm@mysqlmojokerto ~]$
```

11 Configure Master

```
[miiadm@mysqlcirebon ~]$ sudo mysql -uroot -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 9
Server version: 8.0.32 Source distribution

Copyright (c) 2000, 2023, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

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

mysql> select user,host from mysql.user;
+------------------+-----------+
| user             | host      |
+------------------+-----------+
| mysql.infoschema | localhost |
| mysql.session    | localhost |
| mysql.sys        | localhost |
| root             | localhost |
+------------------+-----------+
4 rows in set (0.00 sec)

mysql> create user 'rpl'@'%' identified by 'HEYtayo#789';
Query OK, 0 rows affected (0.01 sec)

mysql> grant replication slave on *.* to 'rpl'@'%';
Query OK, 0 rows affected (0.01 sec)

mysql> flush privileges;
Query OK, 0 rows affected (0.00 sec)

mysql> show master status;
+----------------+----------+--------------+------------------+-------------------+
| File           | Position | Binlog_Do_DB | Binlog_Ignore_DB | Executed_Gtid_Set |
+----------------+----------+--------------+------------------+-------------------+
| log_bin.000004 |      825 |              |                  |                   |
+----------------+----------+--------------+------------------+-------------------+
1 row in set (0.00 sec)
```

```
mysql> select host,user from mysql.user;
+-----------+------------------+
| host      | user             |
+-----------+------------------+
| %         | rpl              |
| localhost | mysql.infoschema |
| localhost | mysql.session    |
| localhost | mysql.sys        |
| localhost | root             |
+-----------+------------------+
5 rows in set (0.00 sec)

mysql> exit
Bye
[miiadm@mysqlcirebon ~]$
```

12 Create Backup Script on Master

```
[miiadm@mysqlcirebon ~]$ sudo mkdir /backup
[miiadm@mysqlcirebon ~]$ sudo vi /backup/fullbackup.sh
[miiadm@mysqlcirebon ~]$ cat /backup/fullbackup.sh
#!/bin/bash
datecr=`date +"_%T"`;
datecrly=`date +"%Y%m%d"`;
mkdir -p /backup/mysql/${datecrly};
cd /backup/mysql/${datecrly};
echo ""; echo "####### CURRENTLY TIME"; date;
echo ""; echo "####### PHASE01 - MASTER STATUS BEFORE BACKUP-";
mysql -uroot -pHEYtayo#789 -e"show master status;";
echo ""; echo "####### PHASE02 - FLUSH BACKUP";
mysql -uroot -pHEYtayo#789 -e"flush logs;";
echo ""; echo "####### PHASE03 - EXEC BACKUP-"; date;
mysqldump -uroot -pHEYtayo#789 --all-databases --single-transaction --master-data=2 >
FULL_DUMP_${datecrly}.dmp;
date;
echo ""; echo "####### PHASE04 - CURRENT MASTER STATUS AFTER BACKUP-";
mysql -uroot -pHEYtayo#789 -e"show master status;";
echo ""; echo "####### PHASE05 - BINARY LOGS.";
mysql -uroot -pHEYtayo#789 -e "show binary logs;"
echo ""; echo "####### DONE";
[miiadm@mysqlcirebon ~]$ sudo mkdir -p /backup/mysql
[miiadm@mysqlcirebon ~]$ sudo chown -R mysql:mysql /backup; sudo chmod -R 775 /backup; ls -lh /backup;
total 4.0K
-rwxrwxr-x. 1 mysql mysql 771 Jul 14 09:09 fullbackup.sh
drwxrwxr-x. 2 mysql mysql   6 Jul 14 09:10 mysql
[miiadm@mysqlcirebon ~]$
```

13 Run Backup Script on Master

```
[mysql@mysqlcirebon backup]$ ./fullbackup.sh

####### CURRENTLY TIME
Fri Jul 14 09:25:38 GMT 2023

####### PHASE01 - MASTER STATUS BEFORE BACKUP-
mysql: [Warning] Using a password on the command line interface can be insecure.
+----------------+----------+--------------+------------------+-------------------+
| File           | Position | Binlog_Do_DB | Binlog_Ignore_DB | Executed_Gtid_Set |
+----------------+----------+--------------+------------------+-------------------+
| log_bin.000007 |      157 |              |                  |                   |
+----------------+----------+--------------+------------------+-------------------+

####### PHASE02 - FLUSH BACKUP
mysql: [Warning] Using a password on the command line interface can be insecure.

####### PHASE03 - EXEC BACKUP-
Fri Jul 14 09:25:38 GMT 2023
mysqldump: [Warning] Using a password on the command line interface can be insecure.
WARNING: --master-data is deprecated and will be removed in a future version. Use --source-data instead.
Fri Jul 14 09:25:38 GMT 2023

####### PHASE04 - CURRENT MASTER STATUS AFTER BACKUP-
```

```
mysql: [Warning] Using a password on the command line interface can be insecure.
+----------------+----------+--------------+------------------+-------------------+
| File           | Position | Binlog_Do_DB | Binlog_Ignore_DB | Executed_Gtid_Set |
+----------------+----------+--------------+------------------+-------------------+
| log_bin.000008 |      157 |              |                  |                   |
+----------------+----------+--------------+------------------+-------------------+

####### PHASE05 - BINARY LOGS.
mysql: [Warning] Using a password on the command line interface can be insecure.
+----------------+-----------+-----------+
| Log_name       | File_size | Encrypted |
+----------------+-----------+-----------+
| log_bin.000001 |       180 | No        |
| log_bin.000002 |       180 | No        |
| log_bin.000003 |       637 | No        |
| log_bin.000004 |       870 | No        |
| log_bin.000005 |       202 | No        |
| log_bin.000006 |       180 | No        |
| log_bin.000007 |       202 | No        |
| log_bin.000008 |       157 | No        |
+----------------+-----------+-----------+

####### DONE
[mysql@mysqlcirebon backup]$ cd mysql/20230714/; ls -lh
total 1.3M
-rw-r--r--. 1 mysql mysql 1.3M Jul 14 09:25 FULL_DUMP_20230714.dmp
[mysql@mysqlcirebon 20230714]$
```

14 Check Position Binlog Dump

```
[mysql@mysqlcirebon 20230714]$ head FULL_DUMP_20230714.dmp -n80 | grep -i master_log_pos
-- CHANGE MASTER TO MASTER_LOG_FILE='log_bin.000008', MASTER_LOG_POS=157;
[mysql@mysqlcirebon 20230714]$
```

15 Transfer Backup to Slave

```
[mysql@mysqlmojokerto ~]$ rsync -vrah mysql@mysqlcirebon:/backup/mysql/* /backup/mysql
The authenticity of host 'mysqlcirebon (99.88.0.96)' can't be established.
ECDSA key fingerprint is SHA256:hMHJu8NOxEWUGye2xKr/8v0+TFU0sOXpqr86B0Y+X/c.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'mysqlcirebon,99.88.0.96' (ECDSA) to the list of known hosts.
mysql@mysqlcirebon's password:
receiving incremental file list
20230714/
20230714/FULL_DUMP_20230714.dmp

sent 47 bytes  received 1.28M bytes  171.32K bytes/sec
total size is 1.28M  speedup is 1.00
[mysql@mysqlmojokerto ~]$ cd /backup/mysql/20230714/; ls -lh
total 1.3M
-rw-r--r--. 1 mysql mysql 1.3M Jul 14 09:25 FULL_DUMP_20230714.dmp
[mysql@mysqlmojokerto 20230714]$
```

16 Test Connect to Master from Slave

```
[mysql@mysqlmojokerto 20230714]$ mysql -urpl -pHEYtayo#789 -h mysqlcirebon -e 'select @@hostname;'
mysql: [Warning] Using a password on the command line interface can be insecure.
+--------------+
| @@hostname   |
+--------------+
| mysqlcirebon |
+--------------+
[mysql@mysqlmojokerto 20230714]$
```

17 Restore Backup on Slave

```
[mysql@mysqlmojokerto 20230714]$ mysql -uroot -p < /backup/mysql/20230714/FULL_DUMP_20230714.dmp
Enter password:
[mysql@mysqlmojokerto 20230714]$
```

18 Configure Read Only on Slave

```
[miiadm@mysqlmojokerto ~]$ sudo vi /etc/my.cnf.d/mysql-server.cnf
[miiadm@mysqlmojokerto ~]$ tail -3 /etc/my.cnf.d/mysql-server.cnf
read_only=ON
super_read_only=ON

[miiadm@mysqlmojokerto ~]$ sudo systemctl stop mysqld
[miiadm@mysqlmojokerto ~]$ sudo systemctl start mysqld
[miiadm@mysqlmojokerto ~]$
```

19 Start Slave

```
[mysql@mysqlmojokerto ~]$ head /backup/mysql/20230714/FULL_DUMP_20230714.dmp -n80 | grep -i master_log_pos
-- CHANGE MASTER TO MASTER_LOG_FILE='log_bin.000008', MASTER_LOG_POS=157;
[mysql@mysqlmojokerto ~]$ mysql -uroot -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 8.0.32 Source distribution

Copyright (c) 2000, 2023, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

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

mysql> select @@hostname
    -> ;
+----------------+
| @@hostname     |
+----------------+
| mysqlmojokerto |
+----------------+
1 row in set (0.00 sec)

mysql> CHANGE MASTER TO MASTER_HOST='mysqlcirebon',
    -> MASTER_USER='rpl',
    -> MASTER_PASSWORD='HEYtayo#789',
    -> MASTER_LOG_FILE= 'log_bin.000007',
    -> MASTER_LOG_POS=157;
Query OK, 0 rows affected, 8 warnings (0.02 sec)

mysql> show warnings; SHOW SLAVE STATUS\G;
+---------+------+----------------------------------------------------------------------
--------------------------------------------------------------------------------------
-----------------------------------------------------------------------+
| Level   | Code | Message
|
+---------+------+----------------------------------------------------------------------
--------------------------------------------------------------------------------------
-----------------------------------------------------------------------+
| Warning | 1287 | 'CHANGE MASTER' is deprecated and will be removed in a future release. Please use CHANGE
REPLICATION SOURCE instead
|
| Warning | 1287 | 'MASTER_HOST' is deprecated and will be removed in a future release. Please use
SOURCE_HOST instead
|
| Warning | 1287 | 'MASTER_USER' is deprecated and will be removed in a future release. Please use
SOURCE_USER instead
|
```

```
| Warning | 1287 | 'MASTER_PASSWORD' is deprecated and will be removed in a future release. Please use
SOURCE_PASSWORD instead
|
| Warning | 1287 | 'MASTER_LOG_FILE' is deprecated and will be removed in a future release. Please use
SOURCE_LOG_FILE instead
|
| Warning | 1287 | 'MASTER_LOG_POS' is deprecated and will be removed in a future release. Please use
SOURCE_LOG_POS instead
|
| Note    | 1759 | Sending passwords in plain text without SSL/TLS is extremely insecure.
|
| Note    | 1760 | Storing MySQL user name or password information in the master info repository is not
secure and is therefore not recommended. Please consider using the USER and PASSWORD connection options for
START SLAVE; see the 'START SLAVE Syntax' in the MySQL Manual for more information. |
+---------+------+-----------------------------------------------------------------------------------------
-----------------------------------------------------------------------------------------------------------
-------------------------------------------------------------------------------+
8 rows in set (0.00 sec)

*************************** 1. row ***************************
               Slave_IO_State:
                  Master_Host: mysqlcirebon
                  Master_User: rpl
                  Master_Port: 3306
                Connect_Retry: 60
              Master_Log_File: log_bin.000007
          Read_Master_Log_Pos: 157
               Relay_Log_File: mysqlmojokerto-relay-bin.000001
                Relay_Log_Pos: 4
        Relay_Master_Log_File: log_bin.000007
             Slave_IO_Running: No
            Slave_SQL_Running: No
              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: 157
              Relay_Log_Space: 157
              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: NULL
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: 0
                  Master_UUID:
             Master_Info_File: mysql.slave_master_info
                    SQL_Delay: 0
          SQL_Remaining_Delay: NULL
      Slave_SQL_Running_State:
           Master_Retry_Count: 86400
                  Master_Bind:
      Last_IO_Error_Timestamp:
     Last_SQL_Error_Timestamp:
               Master_SSL_Crl:
           Master_SSL_Crlpath:
           Retrieved_Gtid_Set:
            Executed_Gtid_Set:
                Auto_Position: 0
         Replicate_Rewrite_DB:
                 Channel_Name:
           Master_TLS_Version:
       Master_public_key_path:
```

```
            Get_master_public_key: 0
            Network_Namespace:
1 row in set, 1 warning (0.00 sec)

ERROR:
No query specified

mysql> start slave;
Query OK, 0 rows affected, 1 warning (0.01 sec)

mysql> show warnings; SHOW SLAVE STATUS\G;
+---------+------+-----------------------------------------------------------------------------------------
--------------+
| Level   | Code | Message
|
+---------+------+-----------------------------------------------------------------------------------------
--------------+
| Warning | 1287 | 'START SLAVE' is deprecated and will be removed in a future release. Please use START
REPLICA instead |
+---------+------+-----------------------------------------------------------------------------------------
--------------+
1 row in set (0.00 sec)

*************************** 1. row ***************************
               Slave_IO_State: Waiting for source to send event
                  Master_Host: mysqlcirebon
                  Master_User: rpl
                  Master_Port: 3306
                Connect_Retry: 60
              Master_Log_File: log_bin.000008
          Read_Master_Log_Pos: 157
               Relay_Log_File: mysqlmojokerto-relay-bin.000004
                Relay_Log_Pos: 369
        Relay_Master_Log_File: log_bin.000008
             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: 157
              Relay_Log_Space: 633
              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: 98
                  Master_UUID: d319dd63-221d-11ee-bfc9-02001700117e
             Master_Info_File: mysql.slave_master_info
                    SQL_Delay: 0
          SQL_Remaining_Delay: NULL
      Slave_SQL_Running_State: Replica has read all relay log; waiting for more updates
           Master_Retry_Count: 86400
                  Master_Bind:
      Last_IO_Error_Timestamp:
     Last_SQL_Error_Timestamp:
               Master_SSL_Crl:
           Master_SSL_Crlpath:
           Retrieved_Gtid_Set:
            Executed_Gtid_Set:
                Auto_Position: 0
```

```
        Replicate_Rewrite_DB:
                 Channel_Name:
           Master_TLS_Version:
       Master_public_key_path:
        Get_master_public_key: 0
            Network_Namespace:
1 row in set, 1 warning (0.00 sec)


ERROR:
No query specified

mysql>
```

20 Create DB on Master

```
mysql> create database rogilani;
Query OK, 1 row affected (0.00 sec)

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| performance_schema |
| rogilani           |
| sys                |
+--------------------+
5 rows in set (0.00 sec)

mysql> exit
Bye
[mysql@mysqlcirebon ~]$
```

21 Check DB Just Created on Slave

```
mysql> create database rogi;
ERROR 1290 (HY000): The MySQL server is running with the --super-read-only option so it cannot execute this
statement
mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| performance_schema |
| sys                |
+--------------------+
4 rows in set (0.00 sec)

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| performance_schema |
| rogilani           |
| sys                |
+--------------------+
5 rows in set (0.00 sec)

mysql> exit
Bye
[mysql@mysqlmojokerto ~]$
```

22 Switchover (20230724)

Original topology: mysqlcirebon is master, mysqlmojokerto is slave.

To be topology: mysqlmojokerto is master, mysqlcirebon is slave.

22.1 Ensure Replication is Running

```
mysql> select @@hostname;
+---------------+
| @@hostname    |
+---------------+
| mysqlmojokerto |
+---------------+
1 row in set (0.00 sec)

mysql> show slave status\G;
*************************** 1. row ***************************
               Slave_IO_State: Waiting for source to send event
                  Master_Host: mysqlcirebon
                  Master_User: rpl
                  Master_Port: 3306
                Connect_Retry: 60
              Master_Log_File: log_bin.000009
          Read_Master_Log_Pos: 157
               Relay_Log_File: mysqlmojokerto-relay-bin.000008
                Relay_Log_Pos: 369
        Relay_Master_Log_File: log_bin.000009
             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: 157
              Relay_Log_Space: 755
              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: 98
                  Master_UUID: d319dd63-221d-11ee-bfc9-02001700117e
             Master_Info_File: mysql.slave_master_info
                    SQL_Delay: 0
          SQL_Remaining_Delay: NULL
      Slave_SQL_Running_State: Replica has read all relay log; waiting for more updates
           Master_Retry_Count: 86400
                  Master_Bind:
      Last_IO_Error_Timestamp:
     Last_SQL_Error_Timestamp:
               Master_SSL_Crl:
           Master_SSL_Crlpath:
           Retrieved_Gtid_Set:
            Executed_Gtid_Set:
                Auto_Position: 0
         Replicate_Rewrite_DB:
                 Channel_Name:
           Master_TLS_Version:
       Master_public_key_path:
```

```
           Get_master_public_key: 0
              Network_Namespace:
1 row in set, 1 warning (0.00 sec)


ERROR:
No query specified

mysql>
```

22.2 Stop All Connections to DB

Note the values for the parameters File and Position.

```
mysql> flush tables with read lock;
Query OK, 0 rows affected (0.00 sec)

mysql> SHOW MASTER STATUS\G;
*************************** 1. row ***************************
             File: log_bin.000009
         Position: 157
     Binlog_Do_DB:
 Binlog_Ignore_DB:
Executed_Gtid_Set:
1 row in set (0.00 sec)

ERROR:
No query specified

mysql> exit
Bye
 [mysql@mysqlcirebon ~]$
```

22.3 Check Slave Status

```
mysql> SHOW REPLICA STATUS\G;
*************************** 1. row ***************************
             Replica_IO_State: Waiting for source to send event
                  Source_Host: mysqlcirebon
                  Source_User: rpl
                  Source_Port: 3306
                Connect_Retry: 60
              Source_Log_File: log_bin.000009
          Read_Source_Log_Pos: 157
               Relay_Log_File: mysqlmojokerto-relay-bin.000008
                Relay_Log_Pos: 369
        Relay_Source_Log_File: log_bin.000009
           Replica_IO_Running: Yes
          Replica_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_Source_Log_Pos: 157
              Relay_Log_Space: 755
              Until_Condition: None
               Until_Log_File:
                Until_Log_Pos: 0
            Source_SSL_Allowed: No
            Source_SSL_CA_File:
            Source_SSL_CA_Path:
               Source_SSL_Cert:
             Source_SSL_Cipher:
                Source_SSL_Key:
        Seconds_Behind_Source: 0
Source_SSL_Verify_Server_Cert: No
                Last_IO_Errno: 0
                Last_IO_Error:
               Last_SQL_Errno: 0
               Last_SQL_Error:
```

```
    Replicate_Ignore_Server_Ids:
                Source_Server_Id: 98
                      Source_UUID: d319dd63-221d-11ee-bfc9-02001700117e
                 Source_Info_File: mysql.slave_master_info
                        SQL_Delay: 0
              SQL_Remaining_Delay: NULL
      Replica_SQL_Running_State: Replica has read all relay log; waiting for more updates
             Source_Retry_Count: 86400
                      Source_Bind:
        Last_IO_Error_Timestamp:
       Last_SQL_Error_Timestamp:
                   Source_SSL_Crl:
               Source_SSL_Crlpath:
             Retrieved_Gtid_Set:
               Executed_Gtid_Set:
                    Auto_Position: 0
            Replicate_Rewrite_DB:
                     Channel_Name:
              Source_TLS_Version:
         Source_public_key_path:
          Get_Source_public_key: 0
                Network_Namespace:
1 row in set (0.00 sec)

ERROR:
No query specified

mysql> select @@hostname, @@global.read_only, @@global.super_read_only;
+---------------+--------------------+--------------------------+
| @@hostname    | @@global.read_only | @@global.super_read_only |
+---------------+--------------------+--------------------------+
| mysqlmojokerto |                  1 |                        1 |
+---------------+--------------------+--------------------------+
1 row in set (0.00 sec)

mysql>
```

22.4 Stop Slave and Do the Switchover

```
mysql> STOP REPLICA;
Query OK, 0 rows affected (0.00 sec)

mysql> reset REPLICA all;
Query OK, 0 rows affected (0.01 sec)

mysql> RESET MASTER;
Query OK, 0 rows affected (0.00 sec)

mysql> SHOW REPLICA STATUS\G;
Empty set (0.00 sec)

ERROR:
No query specified

mysql> SHOW MASTER STATUS\G;
*************************** 1. row ***************************
             File: log_bin.000001
         Position: 157
     Binlog_Do_DB:
 Binlog_Ignore_DB:
Executed_Gtid_Set:
1 row in set (0.00 sec)

ERROR:
No query specified

mysql>
```

22.5 Change Configuration in my.cnf & Restart MySQL

```
[mysql@mysqlmojokerto ~]$ exit
logout
[miiadm@mysqlmojokerto ~]$ sudo vi /etc/my.cnf.d/mysql-server.cnf
[miiadm@mysqlmojokerto ~]$ tail -3 /etc/my.cnf.d/mysql-server.cnf
```

```
read_only=0
super_read_only=0

[miiadm@mysqlmojokerto ~]$ sudo systemctl stop mysqld
[miiadm@mysqlmojokerto ~]$ sudo systemctl start mysqld
[miiadm@mysqlmojokerto ~]$ sudo systemctl status mysqld
● mysqld.service - MySQL 8.0 database server
   Loaded: loaded (/usr/lib/systemd/system/mysqld.service; disabled; vendor preset: disabled)
   Active: active (running) since Mon 2023-07-24 09:11:15 GMT; 6s ago
  Process: 7773 ExecStartPost=/usr/libexec/mysql-check-upgrade (code=exited, status=0/SUCCESS)
  Process: 7690 ExecStartPre=/usr/libexec/mysql-prepare-db-dir mysqld.service (code=exited,
status=0/SUCCESS)
  Process: 7665 ExecStartPre=/usr/libexec/mysql-check-socket (code=exited, status=0/SUCCESS)
 Main PID: 7727 (mysqld)
   Status: "Server is operational"
    Tasks: 39 (limit: 99872)
   Memory: 372.9M
   CGroup: /system.slice/mysqld.service
           └─7727 /usr/libexec/mysqld --basedir=/usr

Jul 24 09:11:14 mysqlmojokerto systemd[1]: Starting MySQL 8.0 database server...
Jul 24 09:11:15 mysqlmojokerto systemd[1]: Started MySQL 8.0 database server.
[miiadm@mysqlmojokerto ~]$

[mysql@mysqlcirebon ~]$ exit
logout
[miiadm@mysqlcirebon ~]$ sudo vi /etc/my.cnf.d/mysql-server.cnf
[miiadm@mysqlcirebon ~]$ tail -3 /etc/my.cnf.d/mysql-server.cnf
read_only=1
super_read_only=1

[miiadm@mysqlcirebon ~]$ sudo systemctl stop mysqld
[miiadm@mysqlcirebon ~]$ sudo systemctl start mysqld
[miiadm@mysqlcirebon ~]$ sudo systemctl status mysqld
● mysqld.service - MySQL 8.0 database server
   Loaded: loaded (/usr/lib/systemd/system/mysqld.service; disabled; vendor preset: disabled)
   Active: active (running) since Mon 2023-07-24 09:11:15 GMT; 6s ago
  Process: 7403 ExecStartPost=/usr/libexec/mysql-check-upgrade (code=exited, status=0/SUCCESS)
  Process: 7320 ExecStartPre=/usr/libexec/mysql-prepare-db-dir mysqld.service (code=exited,
status=0/SUCCESS)
  Process: 7295 ExecStartPre=/usr/libexec/mysql-check-socket (code=exited, status=0/SUCCESS)
 Main PID: 7357 (mysqld)
   Status: "Server is operational"
    Tasks: 39 (limit: 99872)
   Memory: 370.7M
   CGroup: /system.slice/mysqld.service
           └─7357 /usr/libexec/mysqld --basedir=/usr

Jul 24 09:11:14 mysqlcirebon systemd[1]: Starting MySQL 8.0 database server...
Jul 24 09:11:15 mysqlcirebon systemd[1]: Started MySQL 8.0 database server.
[miiadm@mysqlcirebon ~]$
```

22.6 Configure Replication on New Slave

```
[miiadm@mysqlcirebon ~]$ sudo su - mysql
Last login: Mon Jul 24 09:06:21 GMT 2023 on pts/0
[mysql@mysqlcirebon ~]$ mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 8.0.32 Source distribution

Copyright (c) 2000, 2023, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

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

mysql> CHANGE MASTER TO MASTER_HOST='mysqlmojokerto', MASTER_USER='rpl', MASTER_PASSWORD='HEYtayo#789';
Query OK, 0 rows affected, 6 warnings (0.02 sec)

mysql> START REPLICA;
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> show warnings; SHOW REPLICA STATUS\G;
Empty set (0.00 sec)

*************************** 1. row ***************************
             Replica_IO_State: Waiting for source to send event
                  Source_Host: mysqlmojokerto
                  Source_User: rpl
                  Source_Port: 3306
                Connect_Retry: 60
              Source_Log_File: log_bin.000002
          Read_Source_Log_Pos: 157
               Relay_Log_File: mysqlcirebon-relay-bin.000003
                Relay_Log_Pos: 369
        Relay_Source_Log_File: log_bin.000002
           Replica_IO_Running: Yes
          Replica_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_Source_Log_Pos: 157
              Relay_Log_Space: 798
              Until_Condition: None
               Until_Log_File:
                Until_Log_Pos: 0
           Source_SSL_Allowed: No
           Source_SSL_CA_File:
           Source_SSL_CA_Path:
              Source_SSL_Cert:
            Source_SSL_Cipher:
               Source_SSL_Key:
        Seconds_Behind_Source: 0
Source_SSL_Verify_Server_Cert: No
                Last_IO_Errno: 0
                Last_IO_Error:
               Last_SQL_Errno: 0
               Last_SQL_Error:
  Replicate_Ignore_Server_Ids:
             Source_Server_Id: 99
                  Source_UUID: d317c72c-221d-11ee-b734-0200170195fb
             Source_Info_File: mysql.slave_master_info
                    SQL_Delay: 0
          SQL_Remaining_Delay: NULL
    Replica_SQL_Running_State: Replica has read all relay log; waiting for more updates
           Source_Retry_Count: 86400
                  Source_Bind:
      Last_IO_Error_Timestamp:
     Last_SQL_Error_Timestamp:
               Source_SSL_Crl:
           Source_SSL_Crlpath:
           Retrieved_Gtid_Set:
            Executed_Gtid_Set:
                Auto_Position: 0
         Replicate_Rewrite_DB:
                 Channel_Name:
           Source_TLS_Version:
       Source_public_key_path:
        Get_Source_public_key: 0
            Network_Namespace:
1 row in set (0.00 sec)

ERROR:
No query specified

mysql> select @@hostname,@@global.read_only,@@global.super_read_only;
+--------------+--------------------+--------------------------+
| @@hostname   | @@global.read_only | @@global.super_read_only |
+--------------+--------------------+--------------------------+
| mysqlcirebon |                  1 |                        1 |
+--------------+--------------------+--------------------------+
1 row in set (0.00 sec)

mysql> exit
```

```
Bye
[mysql@mysqlcirebon ~]$
```