**Install a MySQL in Master Server**

MySQL is a fast, easy-to-use RDBMS being used for many small and big businesses. MySQL is developed, marketed, and supported by MySQL AB, which is a Swedish company. MySQL is becoming so popular because of many good reasons:

* MySQL is released under an open-source license. So you have nothing to pay to use it.
* MySQL is a very powerful program in its own right. It handles a large subset of the functionality of the most expensive and powerful database packages.
* MySQL uses a standard form of the well-known SQL data language.
* MySQL works on many operating systems and with many languages including PHP, PERL, C, C++, JAVA, etc.
* MySQL works very quickly and works well even with large data sets.
* MySQL is very friendly to PHP, the most appreciated language for web development.
* MySQL supports large databases, up to 50 million rows or more in a table. The default file size limit for a table is 4GB, but you can increase this (if your operating system can handle it) to a theoretical limit of 8 million terabytes (TB).
* MySQL is customizable. The open-source GPL license allows programmers to modify the MySQL software to fit their own specific environments.

Port no . :- 3306

Demon :- sqld

Config File :- /etc/my.cnf

Mysql location :- /var/lib/mysql

Log file :- /var/log/mysqld.log

 Master IP Address is: 192.168.1.1

 Slave IP Address is: 192.168.1.2

Note : - we can also Create / Use Mysql Database without changing Config file and without set Slave. Just install the rpm package and used mysql Database.

1. Install Mysql rpm

# yum install mysql-server mysql

1. Configure a MySQL in Master Server

# vim /etc/my.cnf

Add the following entries under **[mysqld]** section and don’t forget to replace **tecmint** with database name that you would like to replicate on **Slave**.

server-id = 1

binlog-do-db=**tecmint**

relay-log = /var/lib/mysql/mysql-relay-bin

relay-log-index = /var/lib/mysql/mysql-relay-bin.index

log-error = /var/lib/mysql/mysql.err

master-info-file = /var/lib/mysql/mysql-master.info

relay-log-info-file = /var/lib/mysql/mysql-relay-log.info

log-bin = /var/lib/mysql/mysql-bin

1. Restart the **MySQL** service.

# service mysqld restart

1. Login into **MySQL** as **root** user and create the **slave user** and grant privileges for replication. Replace **slave\_user** with user and **your\_password** with password.

# mysql -u root -p

mysql> GRANT REPLICATION SLAVE ON \*.\* TO '**slave\_user**'@'%' IDENTIFIED BY '**your\_password**';

mysql> FLUSH PRIVILEGES;

mysql> FLUSH TABLES WITH READ LOCK;

mysql> SHOW MASTER STATUS;

mysql> quit;

1. Please write down the File (**mysql-bin.000003**) and Position (**11128001**) numbers, we required these numbers later on **Slave** server. Next apply **READ LOCK** to databases to export all the database and master database information with **mysqldump** command.

# mysqldump -u root -p --all-databases --master-data > /root/dbdump.db

1. Once you’ve dump all the databases, now again connect to mysql as root user and unlcok tables.

mysql> UNLOCK TABLES;

mysql> quit;

1. Upload the database dump file on **Slave** Server (**192.168.1.2**) using SCP command.

# scp /root/dbdump.db [root@192.168.1.2:/root/](mailto:root@192.168.1.2:/root/)

##### Install a MySQL in Slave Server

1. Install Mysql rpm

# yum install mysql-server mysql

1. Open **my.cnf** configuration file

# vim /etc/my.cnf

Add the following entries under **[mysqld]** section and don’t forget to replace **IP** address of **Master** server, **tecmint** with database name etc, that you would like to replicate with **Master**.

server-id = 2

master-host=**192.168.1.1**

master-connect-retry=60

master-user=**slave\_user**

master-password=**yourpassword**

replicate-do-db=**tecmint**

relay-log = /var/lib/mysql/mysql-relay-bin

relay-log-index = /var/lib/mysql/mysql-relay-bin.index

log-error = /var/lib/mysql/mysql.err

master-info-file = /var/lib/mysql/mysql-master.info

relay-log-info-file = /var/lib/mysql/mysql-relay-log.info

log-bin = /var/lib/mysql/mysql-bin

1. Now import the dump file that we exported in earlier command and restart the MySQL service.

# mysql -u root -p < /root/dbdump.db

# service mysqld restart

1. Login into **MySQL** as root user and stop the **slave**. Then tell the **slave** to where to look for **Master log file**, that we have write down on master with **SHOW MASTER STATUS**; command as File (**mysql-bin.000003**) and Position (**11128001**) numbers. You must change **192.168.1.1** to the **IP** address of the **Master Server**, and change the **user** and **password** accordingly.

# mysql -u root –p

mysql> slave stop;

mysql> CHANGE MASTER TO MASTER\_HOST='**192.168.1.1**', MASTER\_USER='**slave\_user**', MASTER\_PASSWORD='**yourpassword**', MASTER\_LOG\_FILE='**mysql-bin.000003**', MASTER\_LOG\_POS=**11128001**;

mysql> slave start;

mysql> show slave status\G

### Verifying MySQL Replication on Master and Slave Server

##### On Master Server :

mysql> create database tecmint;

mysql> use tecmint;

mysql> CREATE TABLE employee (c int);

mysql> INSERT INTO employee (c) VALUES (1);

mysql> SELECT \* FROM employee;

##### On Slave Server :

mysql> use tecmint;

mysql> SELECT \* FROM employee;