

## MONGO DB

1. Install latest version of MongoDB from apt-get repository.

Sudo apt-get update && upgrade

Sudo apt-get install mongodb-server

```
srima@srima:~$ mongo --version
MongoDB shell version v4.2.3
git version: 6874650b362138df74be53d366bbefc321ea32d4
OpenSSL version: OpenSSL 1.1.1 11 Sep 2018
allocator: tcmalloc
modules: none
build environment:
  distmod: ubuntu1804
  distarch: x86_64
  target_arch: x86_64
```

2. Create a database student.

```
> use student
switched to db student
>
```

3. Insert operation : 5 students data (Name, Contact, City, Roll No, Branch)

```
> db.stu.insert([{"_id": 1, "Name": "Srima", "Contact": 9871635842, "RollNo": "160", "Branch": "CCVT"}, {"_id": 2, "Name": "Tejasvi", "Contact": 9871635842, "RollNo": "161", "Branch": "Eco"}, {"_id": 3, "Name": "Swaraj", "Contact": 9871635842, "RollNo": "164", "Branch": "ML"}])
BulkWriteResult({
  "writeErrors" : [ ],
  "writeConcernErrors" : [ ],
  "nInserted" : 3,
  "nUpserted" : 0,
  "nMatched" : 0,
  "nModified" : 0,
  "nRemoved" : 0,
  "upserted" : [ ]
})
```

4. Read operation : All the students belong to a particular city

```
> db.stu.find({City: "New Delhi"})
{"_id": 6, "Name": "Srima", "Contact": 9871635842, "RollNo": "160", "Branch": "CCVT", "City": "New Delhi"}
{"_id": 7, "Name": "Tejasvi", "Contact": 9871635842, "RollNo": "161", "Branch": "Eco", "City": "New Delhi"}
```

5. Update operation : Update the branch of all the students to CSE

```
> db.stu.update({'Branch':'CCVT'},{$set: {'Branch':'MFT'}})
WriteResult({"nMatched":1, "nUpserted":0, "nModified":1})
> db.stu.find()
{ "_id" : 1, "Name" : "Srima", "Contact" : 9871635842, "RollNo" : "160", "Branch" : "MFT" }
{ "_id" : 2, "Name" : "Tejasvi", "Contact" : 9871635842, "RollNo" : "161", "Branch" : "Eco" }
{ "_id" : 3, "Name" : "Swaraj", "Contact" : 9871635842, "RollNo" : "164", "Branch" : "ML" }
```

## 6. Take dump of the database

```
srima@srima: ~/DatabaseDump 75x39
srima@srima:~$ mkdir DatabaseDump
srima@srima:~$ mongodump --db student -o /home/srima/DatabaseDump
2020-02-21T13:21:31.007+0530   writing student.stu to
2020-02-21T13:21:31.007+0530   writing student.Stu to
2020-02-21T13:21:31.007+0530   writing student.products to
2020-02-21T13:21:31.008+0530   done dumping student.Stu (0 documents)
2020-02-21T13:21:31.008+0530   done dumping student.stu (6 documents)
2020-02-21T13:21:31.008+0530   done dumping student.products (6 documents)
srima@srima:~$ cd DatabaseDump/
srima@srima:~/DatabaseDump$ ls
student
srima@srima:~/DatabaseDump$
```

## 7. Drop the database

```
> db.dropDatabase()
{ "dropped" : "student", "ok" : 1 }
> show dbs
admin    0.000GB
config  0.000GB
local    0.000GB
```

## 8. Restore the database again to have the full data

```

srima@srima:~$ mongorestore -d student /home/srima/DatabaseDump/student/
2020-02-21T14:41:55.981+0530 warning: the --db and --collection args should only
be used when restoring from a BSON file. Other uses are deprecated and will
not exist in the future; use --nsInclude instead
2020-02-21T14:41:55.981+0530 building a list of collections to restore f
rom /home/srima/DatabaseDump/student dir
2020-02-21T14:41:55.982+0530 reading metadata for student.stu from /home
/srima/DatabaseDump/student/stu.metadata.json
2020-02-21T14:41:55.982+0530 reading metadata for student.products from
/home/srima/DatabaseDump/student/products.metadata.json
2020-02-21T14:41:56.198+0530 restoring student.stu from /home/srima/Data
baseDump/student/stu.bson
2020-02-21T14:41:56.364+0530 restoring student.products from /home/srima
/DatabaseDump/student/products.bson
2020-02-21T14:41:56.364+0530 no indexes to restore
2020-02-21T14:41:56.365+0530 finished restoring student.stu (6 documents
)
2020-02-21T14:41:56.366+0530 reading metadata for student.Stu from /home
/srima/DatabaseDump/student/Stu.metadata.json
2020-02-21T14:41:56.366+0530 no indexes to restore
2020-02-21T14:41:56.366+0530 finished restoring student.products (6 docu
ments)
2020-02-21T14:41:56.519+0530 restoring student.Stu from /home/srima/Data
baseDump/student/Stu.bson
2020-02-21T14:41:56.520+0530 no indexes to restore
2020-02-21T14:41:56.520+0530 finished restoring student.Stu (0 documents
)
2020-02-21T14:41:56.520+0530 done

```

```

> show dbs
admin      0.000GB
config     0.000GB
local      0.000GB
student    0.000GB

```

## 9. Enable authentication on the Mongo

```

> db.createUser(
... {user: "Srima",
...   pwd: "Password",
...   roles: [{role: "userAdminAnyDatabase", db: "admin"}]}
... }
... )
Successfully added user: {
  "user" : "Srima",
  "roles" : [
    {
      "role" : "userAdminAnyDatabase",
      "db" : "admin"
    }
  ]
}
>

```

## 10. Install another version of MongoDB from source (Version 2.6.3) and run it on port 27009



```

1992 cd mongo/
1993 sudo curl -O http://downloads.mongodb.org/linux/mongodb-linux-x86_64
-2.6.12.tgz
1994 sudo tar -zxvf mongodb-linux-x86_64-2.6.12.tgz

```

```

srin@srin:~$ export PATH=mongodb/bin:$PATH
srin@srin:~$ echo $PATH
mongodb/bin:/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin
srin@srin:~$ ls
bootcamp  data      Documents  27009  hello      mysqldump  snap
Bootcamp2020  database  Downloads  ltp     'Onboarding Guide for Trainees.pdf'  ssl
c           DatabaseDump  error.txt  mongo   Pictures   Templates
change      DB          examples.desktop  mongodb-linux-x86_64-2.6.12.tgz  Public    test
copy        Desktop    git         Music    restore.spst  Videos
srin@srin:~$ export PATH=mongo/bin:$PATH
srin@srin:~$ echo $PATH
mongo/bin:mongodb/bin:/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin

```

```

srin@srin:~/mongo/mongodb-linux-x86_64-2.6.12$ sudo bin/mongod --port 27009
2020-02-21T16:33:39.509+0530 [initandlisten] MongoDB starting : pid=6863 port=27009 dbpath=/data/db 64-bit host=srin
2020-02-21T16:33:39.509+0530 [initandlisten] db version v2.6.12
2020-02-21T16:33:39.509+0530 [initandlisten] git version: d73c92b1c85703828b55c2916a5dd4ad46535f6a
2020-02-21T16:33:39.509+0530 [initandlisten] build info: Linux build5.ny.cbi.10gen.cc 2.6.32-431.3.1.el6.x86_64 #1 SMP Fri Jan 3 21:39:27 UTC 2014 x86_
64 BOOST_LIB_VERSION=1_49
2020-02-21T16:33:39.509+0530 [initandlisten] allocator: tcmalloc
2020-02-21T16:33:39.509+0530 [initandlisten] options: { net: { port: 27009 } }
2020-02-21T16:33:39.566+0530 [initandlisten] journal dir=/data/db/journal

```

## 11. Create init service of Mongo installed later\*

## MY SQL

### 1. Install Mysql

Sudo apt-get update && update

Sudo apt-get install mysql

```

srin@srin:~/mysqldump$ sudo mysql --version
mysql Ver 14.14 Distrib 5.7.29, for Linux (x86_64) using EditLine wrapper

```

### 2. Create a database student

```

mysql> create database student;
Query OK, 1 row affected (0.03 sec)

```

### 3. Insert operation : 5 students data (Name, Contact, City, Roll No, Branch)

```
mysql> insert into Stu values ("Srima",987783742,"New Delhi",160,"CCVT"), ("Tejasvi",98716358,"New Delhi",162,"MFT"), ("Swaraj",9876345,"Kolkata",877,"CCVT");
Query OK, 3 rows affected (0.05 sec)
Records: 3 Duplicates: 0 Warnings: 0
```

#### 4. Read operation : All the students belong to a particular city

```
mysql> select * from Stu where City = "New delhi";
+-----+-----+-----+-----+-----+
| Name | Contact | City | RollNo | Branch |
+-----+-----+-----+-----+-----+
| Srima | 987783742 | New Delhi | 160 | CCVT |
| Tejasvi | 98716358 | New Delhi | 162 | MFT |
+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

#### 5. Update operation : Update the branch of all the students to CSE

```
mysql> update Stu set Name = "Srima pal" where Name = "Srima";
Query OK, 1 row affected (0.11 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> Select * from Stu;
+-----+-----+-----+-----+-----+
| Name | Contact | City | RollNo | Branch |
+-----+-----+-----+-----+-----+
| Srima pal | 987783742 | New Delhi | 160 | CCVT |
| Tejasvi | 98716358 | New Delhi | 162 | MFT |
| Swaraj | 9876345 | Kolkata | 877 | CCVT |
+-----+-----+-----+-----+-----+
3 rows in set (0.01 sec)
```

#### 5. Take dump of the database

```

srima@srima:~$ sudo mysqldump student > /home/srima/mysqldump/backup.sql
[sudo] password for srima:
srima@srima:~$ cd mysqldump/
srima@srima:~/mysqldump$ ls
backup.sql
srima@srima:~/mysqldump$

```

**6. Delete operation : Delete the record of last 2 students according to the roll number**

```

mysql> delete from Stu order by RollNo desc limit 2;
Query OK, 2 rows affected (0.05 sec)

mysql> select * from Stu;
+-----+-----+-----+-----+-----+
| Name      | Contact | City      | RollNo | Branch |
+-----+-----+-----+-----+-----+
| Srima pal | 987783742 | New Delhi | 160    | CCVT    |
+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

```

**7. Drop the database**

```

mysql> drop database student;
Query OK, 1 row affected (0.22 sec)

mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| d |
| mysql |
| performance_schema |
| sale |
| sys |
+-----+
6 rows in set (0.00 sec)

mysql>

```



## 8. Restore the database again to have the full data

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

mysql> exit
Bye
srima@srima:~$ sudo mysql student</home/srima/mysqldump/backup.sql
srima@srima:~$ sudo mysql;
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 22
Server version: 5.7.29-0ubuntu0.18.04.1 (Ubuntu)

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owners.

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

mysql> use student;
Database changed
mysql> show tables;
+-----+
| Tables_in_student |
+-----+
| Stu                |
+-----+
1 row in set (0.00 sec)

mysql>
```

## 9. Enable authentication on the Mysql

```
mysql> Create user 'Srima'@'localhost' IDENTIFIED BY 'Password';
ERROR 1819 (HY000): Your password does not satisfy the current policy requirements
mysql> Create user 'Srima'@'localhost' IDENTIFIED BY 'd5EWDan@';
Query OK, 0 rows affected (0.03 sec)

mysql> GRANT SELECT ON *.* to 'Srima'@'localhost';
Query OK, 0 rows affected (0.00 sec)
```

```
mysql> use student;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> update Stu set Name="Swaraj Nair" where Name="Swaraj";
ERROR 1142 (42000): UPDATE command denied to user 'Srima'@'localhost' for table 'Stu'
mysql> Select Name from Stu;
+-----+
| Name      |
+-----+
| Srima pal |
| Tejasvi   |
| Swaraj     |
+-----+
3 rows in set (0.01 sec)
```

```
mysql> GRANT SELECT ON *.* to 'Srima'@'localhost';
Query OK, 0 rows affected (0.00 sec)
```

## 10. Install another mysql

Sudo apt-get update && update -y  
Sudo apt-get install mysql-server -y

```
srima@srima:~/mysqldump$ sudo mysql --version
[sudo] password for srima:
Sorry, try again.
[sudo] password for srima:
mysql Ver 14.14 Distrib 5.7.29, for Linux (x86_64) using EditLine wrapper
srima@srima:~/mysqldump$
```

## 11. Create init service of Mongo installed later\*

## 12. Install another version of MongoDB from source (Version 2.6.3) and run it on port 27009