MongoDB Sharding

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Note:

Useful links:
Most Imp link : http://severalnines.com/blog/turning—mongodb—
replica—set—sharded—cluster
Other links: 1) https://docs.mongodb.org/v3.0/reference/command/
shardCollection/
    2) https://docs.mongodb.org/manual/tutorial/deploy—
replica—set/
    3) https://docs.mongodb.org/manual/tutorial/deploy—
shard—cluster/
    4) https://docs.mongodb.org/v3.0/reference/method/
db.collection.createIndex/
    5) https://docs.mongodb.org/v3.0/core/sharding—
introduction/

rs.slaveOk() — To allow mongo commands
rs.conf() — To get the configuration
rs.status() — To get the status of all nodes

To make other node as PRIMARY

```
cfg = rs.conf()
cfg.members[0].priority = 0.5;
cfg.members[1].priority = 1;
cfg.members[2].priority = 0.5;
rs.reconfig(cfg);
```

To make 2nd node as PRIMARY

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MongoDB sharing without replicaset

1) **Start mongodb Shard server**

```
sudo ./mongod ——dbpath /data/testing_shard/data1/ ——port 27018
sudo ./mongod ——dbpath /data/testing_shard/data2/ ——port 27028
```

2) **Start Mongod Config server**

```
sudo ./mongod ——port 27019 ——configsvr ——dbpath /data/testing_shard/
config
```

3) **Start Mongos server**

```
sudo ./mongos ——configdb localhost:27019 ——port 27017
```

4) a) **Connect to mongos**

```
sudo ./mongo ——port 27017
```

b) add shard

```
sh.addShard("localhost:27018");
sh.addShard("localhost:27028");
```

c) enable sharding

```
sh.enableSharding("user");
```

d) shardCollection
   For that you have to createIndex first
   so create index using this connected mongos server only

```
use user;
db.client.createIndex({clientId:1});
```

Now shardCollection

```
sh.shardCollection("user.client",{clientId:1});
```

go to user database and run following command to check shardDistribution and info:

```
db.client.getShardDistribution();
```

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MongoDB Sharding using replicaset

1) Start MongoDB with replicatSet

```
sudo ./mongod --dbpath /data/testing/shard_data/ --port 27017 --replSet nantest_shard
```

2) Connect to mongo

```
sudo ./mongo —port 27017

rs.initiate({_id:"nantest_shard",members:[{_id:0,host:"localhost:27017"}] });

rs.status();  — To verify
```

Note:—

If you want to add another server as secondary

```
sudo ./mongod --dbpath /data/testing/shard_data2 --port 27027 --replSet nantest_shard
```

Add this to server config using mongo:27017

```
rs.add("localhost:27027");
```

3) Stop all mongod and mongo

4) Start config server

```
sudo ./mongod --port 27019 --configsvr --dbpath /data/testing/config
```

5) Start mongos

```
sudo ./mongos --configdb localhost:27019 --port 27017
```

6) Start all mongo replica server with 27018(instead of 27017)

```
sudo ./mongod --dbpath /data/testing/shard_data/ --port 27018 --
replSet nantest_shard
```

7) Change config

```
sudo ./mongod --port 27019 --configsvr --dbpath /data/testing/config
```

8)
Start Mongos server

```
sudo ./mongos --configdb localhost:27019 --port 27017
```

Connect mongos

```
sudo ./mongo --port 27017
```

```
sh.addShard("nantest_shard/localhost:27018,localhost:27027")
```

```
sh.enableSharding("user")
```

Create index on the shard key
connect to mongo on port 27018

```
db.client.createIndex({clientId:1})
```

Add shard key to collection

```
sh.shardCollection("user.client",{clientId:1});
```