Replication in MongoDB

First of All you need three node for MongoDB and in all server we need to install same version of MongoDB:

192.168.2.112 - Primary

192.168.2.114 - Secondary

192.168.2.141 - Secondary 2

**Step 1 — Configuring DNS Resolution**  
  
**On** each of your three servers, edit the file with your preferred text editor. Here, we’ll use vi:

**Command** : sudo vi /etc/hosts

192.168.2.141 mongo2.replset.member

192.168.2.114 mongo1.replset.member

192.168.2.112 mongo0.replset.member

**Step 2 — Updating Each Server’s Firewall Configurations with UFW**

We need to run this on all three node one by one for allow mongoDB default port

sudo ufw allow from 192.168.2.112 to any port 27017

sudo ufw allow from 192.168.2.114 to any port 27017

sudo ufw allow from 192.168.2.141 to any port 27017

**Step 3 — Enabling Replication in Each Server’s MongoDB Configuration File**

We need setting up in mongod.conf file

**1)** Find the network interfaces section. It will look like this by default:

# network interfaces

net:

port: 27017

bindIp: 127.0.0.1

Need to add mongodb host or IP addresses of local machine as like:

This will be apply in all other node of MongoDB

# network interfaces (Primary Node)

net:

port: 27017

bindIp: 127.0.0.1,192.168.2.112

# network interfaces (secondary Node)

net:

port: 27017

bindIp: 127.0.0.1,192.168.2.114

# network interfaces (Secondary2 Node)

net:

port: 27017

bindIp: 127.0.0.1,192.168.2.141

**2)** Next, find the line that reads **#replication:** towards the bottom of the file. It will look like this:

This is also need to apply in all other node and make sure do not mistake in any yml format.

replication:

replSetName: "sigmastream"

Now Restart mongoDB in all three node after the apply configration.

sudo service mongod restart

**Step 4 — Starting the Replica Set and Adding Members**

**1)** This will be only performed in Primary node. Enter into mongo and run this below command:  
Here in the ID section you need to enter you replication Name and then in member add other node IP addresses.

> rs.initiate(

... {

... \_id: "sigmastream",

... members: [

... { \_id: 0, host: "192.168.2.112" },

... { \_id: 1, host: "192.168.2.114" },

... { \_id: 2, host: "192.168.2.141" }

... ]

... })

**2)** After this you will get output as like below:

{

"ok" : 1,

"$clusterTime" : {

"clusterTime" : Timestamp(1612389071, 1),

"signature" : {

"hash" : BinData(0,"AAAAAAAAAAAAAAAAAAAAAAAAAAA="),

"keyId" : NumberLong(0)

}

},

"operationTime" : Timestamp(1612389071, 1)

}

**3)** if the replica set was initiated as expected, you’ll notice that the MongoDB client’s prompt will change from just a greater-than sign (>) to the following:

sigmastream:SECONDARY

Wait for 2 minute and value is change PRIMARY Instead of SECONDARY

sigmastream:PRIMARY

**Step 5 — Setting up Priority for Replication Set Member**

1) Copy the replica set configuration to a variable.

cfg = rs.conf ()

2) Change each member's priority value.

cfg.members[0].priority = 3

cfg.members[1].priority = 1

cfg.members[2].priority = 2

3) Assign the replica set the new configuration

rs.reconfig(cfg)

**Step 6 — Setting up Slave member or Secondary Node**  
 **1)** Enter in the mongo console

sigmastream:SECONDARY> show dbs;

You will get output as like :

2023-06-13T11:01:27.325+0000 E QUERY [thread1] Error: listDatabases failed:{

"operationTime" : Timestamp(1686654087, 20),

"ok" : 0,

"errmsg" : "not master and slaveOk=false",

"code" : 13435,

"codeName" : "NotMasterNoSlaveOk",

"$clusterTime" : {

"clusterTime" : Timestamp(1686654087, 20),

"signature" : {

"hash" : BinData(0,"AAAAAAAAAAAAAAAAAAAAAAAAAAA="),

"keyId" : NumberLong(0)

}

}

} :

2) Then we Need to run below command for setup Slave Node  
  
 rs.slaveOk(