**MongoDB Replica Clustering**

**1. Connect to all four servers and create data like as follows**

**mkdir -p /var/opt/data/flat/mondodb/data (On 1 server)**

**mkdir -p /var/opt/data/flat/mondodb/data (On 2 server)**

**mkdir -p /var/opt/data/flat/mondodb/data (On 3 server)**

**mkdir -p /var/opt/data/flat/mondodb/data (On 4 server)**

**Note:** Create all the directories with root user

**2. Start four mongod instances on the different servers with same replica set in the backgroud on different ports**

**mongod --dbpath /var/opt/data/flat/mondodb/data --port 10001 --replSet seenrs &**

**mongod --dbpath /var/opt/data/flat/mondodb/data --port 10002 --replSet seenrs &**

**mongod --dbpath /var/opt/data/flat/mondodb/data --port 10003 --replSet seenrs &**

**mongod --dbpath /var/opt/data/flat/mondodb/data --port 10004 --replSet seenrs &**

**Note:** Start mongodb with root user

**3. Connect to one mongo client like connect to 10001 port mongo shell as a admin**

**mongo localhost:10001/admin**

**Note:** Connect to the client with admin user

**4. Set the configuration like as follows:**

**config = { \_id: "seenrs", members:[**

**{\_id: 0, host : "10.253.42.6:10001"},**

**{\_id: 1, host : "10.253.42.7:10002"},**

**{\_id: 2, host : "10.253.42.8:10003"}**

**{\_id: 3, host : "10.253.42.9:10004"}]**

**};**

**Note :** Define IP instead of defining localhost for the same server as well.

**Note:** Set this configuration with root user

**5. We can initiate the replica set**

**rs.initiate(config);**

**6. We can check the status of the replica set , we will see who is primary and secondary**

**rs.status();**

**One instance will be primary server and another server will be secondary servers.**

**7. We can check the failover by stopping one dB instance and check status again**

**rs.status();**

**One instance will be unavailable , any another instance will be working as a primary server and another servers will be secondary servers.**

**Validation on QA**

1. **After starting all three nodes we check the status as follows :**

**10.253.42.6:10001 (Primary)**

**10.253.42.7:10002 (Secondry)**

**10.253.42.7:10003 (Secondry)**

**seenrs:SECONDARY> rs.status();**

**{**

**"set" : "seenrs",**

**"date" : ISODate("2017-12-13T12:32:15.651Z"),**

**"myState" : 2,**

**"term" : NumberLong(2),**

**"syncingTo" : "10.253.42.8:10003",**

**"heartbeatIntervalMillis" : NumberLong(2000),**

**"optimes" : {**

**"lastCommittedOpTime" : {**

**"ts" : Timestamp(1513168332, 1),**

**"t" : NumberLong(2)**

**},**

**"appliedOpTime" : {**

**"ts" : Timestamp(1513168332, 1),**

**"t" : NumberLong(2)**

**},**

**"durableOpTime" : {**

**"ts" : Timestamp(1513168332, 1),**

**"t" : NumberLong(2)**

**}**

**},**

**"members" : [**

**{**

**"\_id" : 0,**

**"name" : "10.253.42.6:10001",**

**"health" : 0,**

**"state" : 8,**

**"stateStr" : "PRIMARY",**

**"uptime" : 0,**

**"optime" : {**

**"ts" : Timestamp(0, 0),**

**"t" : NumberLong(-1)**

**},**

**"optimeDurable" : {**

**"ts" : Timestamp(0, 0),**

**"t" : NumberLong(-1)**

**},**

**"optimeDate" : ISODate("1970-01-01T00:00:00Z"),**

**"optimeDurableDate" : ISODate("1970-01-01T00:00:00Z"),**

**"lastHeartbeat" : ISODate("2017-12-13T12:32:13.707Z"),**

**"lastHeartbeatRecv" : ISODate("2017-12-13T12:30:39.948Z"),**

**"pingMs" : NumberLong(0),**

**"lastHeartbeatMessage" : "Connection refused",**

**"configVersion" : -1**

**},**

**{**

**"\_id" : 1,**

**"name" : "10.253.42.7:10002",**

**"health" : 1,**

**"state" : 2,**

**"stateStr" : "SECONDARY",**

**"uptime" : 819,**

**"optime" : {**

**"ts" : Timestamp(1513168332, 1),**

**"t" : NumberLong(2)**

**},**

**"optimeDate" : ISODate("2017-12-13T12:32:12Z"),**

**"syncingTo" : "10.253.42.8:10003",**

**"configVersion" : 1,**

**"self" : true**

**},**

**{**

**"\_id" : 2,**

**"name" : "10.253.42.8:10003",**

**"health" : 1,**

**"state" : 1,**

**"stateStr" : "SECONDARY",**

**"uptime" : 375,**

**"optime" : {**

**"ts" : Timestamp(1513168332, 1),**

**"t" : NumberLong(2)**

**},**

**"optimeDurable" : {**

**"ts" : Timestamp(1513168332, 1),**

**"t" : NumberLong(2)**

**},**

**"optimeDate" : ISODate("2017-12-13T12:32:12Z"),**

**"optimeDurableDate" : ISODate("2017-12-13T12:32:12Z"),**

**"lastHeartbeat" : ISODate("2017-12-13T12:32:14.673Z"),**

**"lastHeartbeatRecv" : ISODate("2017-12-13T12:32:14.827Z"),**

**"pingMs" : NumberLong(0),**

**"electionTime" : Timestamp(1513168250, 1),**

**"electionDate" : ISODate("2017-12-13T12:30:50Z"),**

**"configVersion" : 1**

**}**

**],**

**"ok" : 1**

**}**

1. **If Primary instance is stopped then any other instance will automatically react as a primary.**

**10.253.42.6:10001 (not reachable)**

**10.253.42.7:10002 (Secondry)**

**10.253.42.7:10003 (Primary)**

seenrs:SECONDARY> rs.status();

{

"set" : "seenrs",

"date" : ISODate("2017-12-13T12:32:15.651Z"),

"myState" : 2,

"term" : NumberLong(2),

"syncingTo" : "10.253.42.8:10003",

"heartbeatIntervalMillis" : NumberLong(2000),

"optimes" : {

"lastCommittedOpTime" : {

"ts" : Timestamp(1513168332, 1),

"t" : NumberLong(2)

},

"appliedOpTime" : {

"ts" : Timestamp(1513168332, 1),

"t" : NumberLong(2)

},

"durableOpTime" : {

"ts" : Timestamp(1513168332, 1),

"t" : NumberLong(2)

}

},

"members" : [

{

"\_id" : 0,

"name" : "10.253.42.6:10001",

"health" : 0,

"state" : 8,

"stateStr" : "(not reachable/healthy)",

"uptime" : 0,

"optime" : {

"ts" : Timestamp(0, 0),

"t" : NumberLong(-1)

},

"optimeDurable" : {

"ts" : Timestamp(0, 0),

"t" : NumberLong(-1)

},

"optimeDate" : ISODate("1970-01-01T00:00:00Z"),

"optimeDurableDate" : ISODate("1970-01-01T00:00:00Z"),

"lastHeartbeat" : ISODate("2017-12-13T12:32:13.707Z"),

"lastHeartbeatRecv" : ISODate("2017-12-13T12:30:39.948Z"),

"pingMs" : NumberLong(0),

"lastHeartbeatMessage" : "Connection refused",

"configVersion" : -1

},

{

"\_id" : 1,

"name" : "10.253.42.7:10002",

"health" : 1,

"state" : 2,

"stateStr" : "SECONDARY",

"uptime" : 819,

"optime" : {

"ts" : Timestamp(1513168332, 1),

"t" : NumberLong(2)

},

"optimeDate" : ISODate("2017-12-13T12:32:12Z"),

"syncingTo" : "10.253.42.8:10003",

"configVersion" : 1,

"self" : true

},

{

"\_id" : 2,

"name" : "10.253.42.8:10003",

"health" : 1,

"state" : 1,

"stateStr" : "PRIMARY",

"uptime" : 375,

"optime" : {

"ts" : Timestamp(1513168332, 1),

"t" : NumberLong(2)

},

"optimeDurable" : {

"ts" : Timestamp(1513168332, 1),

"t" : NumberLong(2)

},

"optimeDate" : ISODate("2017-12-13T12:32:12Z"),

"optimeDurableDate" : ISODate("2017-12-13T12:32:12Z"),

"lastHeartbeat" : ISODate("2017-12-13T12:32:14.673Z"),

"lastHeartbeatRecv" : ISODate("2017-12-13T12:32:14.827Z"),

"pingMs" : NumberLong(0),

"electionTime" : Timestamp(1513168250, 1),

"electionDate" : ISODate("2017-12-13T12:30:50Z"),

"configVersion" : 1

}

],

"ok" : 1

}