Procedure to Handle a Corrupted MongoDB in CPS Mongo Replica Set

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Introduction

This document describes the procedure to handle a corrupted MongoData Base (DB) in Cisco Policy Suite (CPS) replica sets.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Linux
- CPS
- MongoDB

Note: Cisco recommends that you must have privilege Root access to CPS CLI.

Components Used

The information in this document is based on these software and hardware versions:

- CPS 20.2
- MongoDB v3.6.17
- UCS-B

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

Background Information

MongoDB is a source-available cross-platform document-oriented database (DB) program.

Classified as a NoSQL DB program. MongoDB is extensively used in CPS to manage its different types of DBs viz SESSION, Subscriber Profile Repository (SPR), Balance, and so on.

Problem

MongoDB gets corrupted when you do an improper db defragmentation while aido_client is still active inside the sessionmgr.

This leads MongoDB to hold data in memory but not be able to write them locally on the db paths.

This can cause loss of data if the primary member (mongo instance) is restarted on the affected replica set or the sessionmgr VM restarts.

In order to understand how a DB member looks to be corrupted, you can log in to one of the problematic members and perform provided checks.

Step1. When you run the command **show dbs**, no output of DB list returned. But when you check the count inside the DB you are aware of, it returns the count.

```
[root@lab-1-pcrfclient01 ~]# mongo --host sessionmgr05:27737
MongoDB shell version v3.6.17
connect to: mongodb://sessionmgr05:27737/?gssapiServiceName=mongodb
Implicit session: session { "id" : UUID("a8f9b0eb-6e78-4bcd-bd63-60a9a9d813d0") }
MongoDB server version: 3.6.17
Server has startup warnings:
2022-03-09T00:53:26.910-0300 I CONTROL [initandlisten]
2022-03-09T00:53:26.910-0300 I CONTROL [initandlisten] ** WARNING: Access control is not
enabled for the database.
2022-03-09T00:53:26.910-0300 I CONTROL [initandlisten] **
                                                                 Read and write access to
data and configuration is unrestricted.
2022-03-09T00:53:26.910-0300 I CONTROL [initandlisten] **
2022-03-09T00:53:26.910-0300 I CONTROL [initandlisten]
2022-03-09T00:53:26.949-0300 I REPL [replexec-0]
2022-03-09T00:53:26.949-0300 I REPL
                                       [replexec-0] ** WARNING: This replica set uses arbiters,
but readConcern:majority is enabled
2022-03-09T00:53:26.949-0300 I REPL
                                      [replexec-0] **
                                                              for this node. This is not a
recommended configuration. Please see
2022-03-09T00:53:26.949-0300 I REPL [replexec-0] **
2022-03-09T00:53:26.949-0300 I REPL
                                      [replexec-0]
set01e:PRIMARY>
set01e:PRIMARY> show dbs ## "no dbs reported"
set01e:PRIMARY> use session_cache ## "Switched to a known DB"
switched to db session_cache
set01e:PRIMARY> db.session.count()
223037 ## "DB has the content inside, hence the total record count is shown"
set01e:PRIMARY> use session_cache_2
switched to db session_cache_2
set01e:PRIMARY> db.session.count()
223643
set01e:PRIMARY> use session_cache_3
switched to db session_cache_3
set01e:PRIMARY> db.session.count()
222939
set01e:PRIMARY> use session_cache_4
switched to db session_cache_4
set01e:PRIMARY> db.session.count()
223692
```

set01e:PRIMARY> set01e:PRIMARY> exit bye

Step 2. When you run **diagnostics.sh --get_shard**, application shard shows the data. This is actually stored in in-memory, not in the DBPATH of the Sessionmgr Virtual Machine (VM).

[root@lab-1-pcrfclient01 ~]# diagnostics.sh --get_shard CPS Diagnostics GR Multi-Node Environment

|------| | SHARD STATUS INFORMATION Date : 2022-03-09 11:00:23 | |-------|

Shard Id	Mongo DB	State	Backup DB	Removed	Session
Count					
43	sessionmgr01:27717/session_cache	online	false	false	223873
1	<pre>sessionmgr01:27717/session_cache_2</pre>	online	false	false	222918
2	<pre>sessionmgr01:27717/session_cache_3</pre>	online	false	false	223720
3	sessionmgr01:27717/session_cache_4	online	false	false	223393
8	<pre>sessionmgr05:27737/session_cache</pre>	online	false	false	223188
9	<pre>sessionmgr05:27737/session_cache_2</pre>	online	false	false	223554
10	<pre>sessionmgr05:27737/session_cache_3</pre>	online	false	false	222920
11	<pre>sessionmgr05:27737/session_cache_4</pre>	online	false	false	223562
12	sessionmgr07:27747/session_cache	online	false	false	222663
13	<pre>sessionmgr07:27747/session_cache_2</pre>	online	false	false	222599
14	<pre>sessionmgr07:27747/session_cache_3</pre>	online	false	false	222475
15	<pre>sessionmgr07:27747/session_cache_4</pre>	online	false	false	223446
16	<pre>sessionmgr09:27757/session_cache</pre>	online	false	false	223246
17	<pre>sessionmgr09:27757/session_cache_2</pre>	online	false	false	223669
18	<pre>sessionmgr09:27757/session_cache_3</pre>	online	false	false	223711
19	<pre>sessionmgr09:27757/session_cache_4</pre>	online	false	false	223311
35	sessionmgr13:27717/session_cache	online	true	false	0
36	<pre>sessionmgr13:27717/session_cache_2</pre>	online	true	false	0
37	<pre>sessionmgr13:27717/session_cache_3</pre>	online	true	false	0
38	sessionmgr13:27717/session_cache_4	online	true	false	0

Rebalance Status: Rebalanced

Step 3. This output shows there is no content inside the DB PATH where actual data is supposed to be stored.

[SESSION-SET3] SETNAME=set01e OPLOG_SIZE=5120 ARBITER=lab-1-arb-sessmgr15:27737 ARBITER_DATA_PATH=/var/data/sessions.1/set01e PRIMARY-MEMBERS MEMBER1=lab-1-sessionmgr05:27737 MEMBER2=lab-1-sessionmgr06:27737 SECONDARY-MEMBERS MEMBER3=lab-2-sessionmgr05:27737 MEMBER4=lab-2-sessionmgr06:27737 DATA_PATH=/var/data/sessions.1/set01e ## "DB DATA Path of set01e replicaset" [SESSION-SET3-END]

Secure Shell (SSH) to the associated sessionmgr and navigate to the DB_PATH mentioned in the mongo configuration. You can see the content inside the DB_PATH is empty.

```
[root@lab-1-sessionmgr05 ~]# cd /var/data/sessions.1/set0le
[root@lab-1-sessionmgr05 ~]# ls -lrt
total 0
[root@lab-1-sessionmgr05 ~]#
With these sheels you can some to the conclusion that Management of the second s
```

With these checks, you can come to the conclusion that MongoDB is corrupted.

Procedure to Repair the Corrupted DB Member

Step 1. SSH to the Primary members of the problematic replica set.

Step 2. Stop the aido_client (ensure to stop the aido client on all the members of the replica set which belongs to set01e).

Step 3. Connect to the mongo shell of set01e and run these steps.

```
# mongo --port 27737
                                        # Ensure this returns empty output.
    # show dbs
    # use admin
    # db.repairDatabase()
    # use config
    # db.repairDatabase()
    # exit
[root@lab-1-sessionmgr05 set01e]# mongo --port 27737
MongoDB shell version v3.6.17
connect to: mongodb://127.0.0.1:27737/?gssapiServiceName=mongodb
Implicit session: session { "id" : UUID("ff9df861-0b42-4e8a-99c1-3583670e1926") }
MongoDB server version: 3.6.17
Server has startup warnings:
2022-03-09T00:53:26.910-0300 I CONTROL [initandlisten]
2022-03-09T00:53:26.910-0300 I CONTROL [initandlisten] ** WARNING: Access control is not
enabled for the database.
2022-03-09T00:53:26.910-0300 I CONTROL [initandlisten] **
                                                                 Read and write access to
data and configuration is unrestricted.
2022-03-09T00:53:26.910-0300 I CONTROL [initandlisten] **
2022-03-09T00:53:26.910-0300 I CONTROL [initandlisten]
2022-03-09T00:53:26.949-0300 I REPL [replexec-0]
2022-03-09T00:53:26.949-0300 I REPL
                                       [replexec-0] ** WARNING: This replica set uses arbiters,
but readConcern:majority is enabled
2022-03-09T00:53:26.949-0300 I REPL
                                      [replexec-0] **
                                                               for this node. This is not a
recommended configuration. Please see
2022-03-09T00:53:26.949-0300 I REPL
                                      [replexec-0] **
2022-03-09T00:53:26.949-0300 I REPL
                                      [replexec-0]
set01e:PRIMARY> use admin
switched to db admin
set01e:PRIMARY> db.repairDatabase()
"ok" : 1,
"operationTime" : Timestamp(1647319246, 352),
"$clusterTime" : {
"clusterTime" : Timestamp(1647319246, 352),
"signature" : {
"hash" : BinData(0, "AAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
"keyId" : NumberLong(0)
}
}
}
set01e:PRIMARY>
set01e:PRIMARY> use config
switched to db config
```

```
set01e:PRIMARY> db.repairDatabase()
{
"ok" : 1,
"operationTime" : Timestamp(1647319301, 218),
"$clusterTime" : {
"clusterTime" : Timestamp(1647319301, 218),
"signature" : {
"hash" : BinData(0, "AAAAAAAAAAAAAAAAAAAAAAAAAAAAAA="),
"keyId" : NumberLong(0)
ł
}
}
set01e:PRIMARY> show dbs
admin 0.031GB
config 0.031GB
set01e:PRIMARY> exit
```

Step 4. Connect back on the same replica instant and perform these commands on all session_cache_dbs. A sample of session_cache DB is briefed here.

```
# mongo --port 27737
    # use session_cache
    # db.session.count()
                                        # Use this to check that session counts are still intact
    # db.stats(1024*1024*1024) # Use this to verify that the storage size is proper
    # db.repairDatabase()
    # exit
[root@lab-1-sessionmgr05 set01e]# mongo --port 27737
MongoDB shell version v3.6.17
connect to: mongodb://127.0.0.1:27737/?gssapiServiceName=mongodb
Implicit session: session { "id" : UUID("73794d11-0785-4520-ba82-19f0d2bba338") }
MongoDB server version: 3.6.17
Server has startup warnings:
2022-03-09T00:53:26.910-0300 I CONTROL [initandlisten]
2022-03-09T00:53:26.910-0300 I CONTROL [initandlisten] ** WARNING: Access control is not
enabled for the database.
2022-03-09T00:53:26.910-0300 I CONTROL [initandlisten] **
                                                                  Read and write access to
data and configuration is unrestricted.
2022-03-09T00:53:26.910-0300 I CONTROL [initandlisten] **
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but readConcern:majority is enabled
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                                      [replexec-0] **
                                                                for this node. This is not a
recommended configuration. Please see
                                     [replexec-0] **
2022-03-09T00:53:26.949-0300 I REPL
2022-03-09T00:53:26.949-0300 I REPL [replexec-0]
set01e:PRIMARY>
set01e:PRIMARY>
set01e:PRIMARY>
set01e:PRIMARY> show dbs
admin 0.031GB
config 0.031GB
set01e:PRIMARY> use session_cache
switched to db session cache
set01e:PRIMARY>
set01e:PRIMARY> db.stats(1024*1024*1024)
{
"db" : "session_cache",
"collections" : 3,
"views" : 0,
"objects" : 212467,
"avgObjSize" : 8175.252062673262,
```

```
"dataSize" : 1.6176805645227432,
"storageSize" : 2.471107453107834,
"numExtents" : 22,
"indexes" : 3,
"indexSize" : 0.30870679020881653,
"fileSize" : 0,
"nsSizeMB" : 16,
"extentFreeList" : {
"num" : 0,
"totalSize" : 0
},
"dataFileVersion" : {
"major" : 4,
"minor" : 22
},
"fsUsedSize" : 38.36811065673828,
"fsTotalSize" : 47.044921875,
"ok" : 1,
"operationTime" : Timestamp(1647321405, 102),
"$clusterTime" : {
"clusterTime" : Timestamp(1647321405, 103),
"signature" : {
"hash" : BinData(0, "AAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
"keyId" : NumberLong(0)
}
}
}
set01e:PRIMARY> db.repairDatabase()
{
"ok" : 1,
"operationTime" : Timestamp(1647321444, 84),
"$clusterTime" : {
"clusterTime" : Timestamp(1647321444, 84),
"signature" : {
"hash" : BinData(0, "AAAAAAAAAAAAAAAAAAAAAAAAAAAAAA="),
"keyId" : NumberLong(0)
}
}
}
set01e:PRIMARY> show dbs
admin 0.031GB
             0.031GB
config
session_cache 2.499GB
```

Note: Repeat Step 4. for the rest of the session_cache DBs.

Step 5. Ensure that **show dbs** now lists all the DBs when you connect the same mongo instance back.

mongo --port 27737
set0le:PRIMARY> show dbs
admin 0.031GB
config 0.031GB
session_cache 2.499GB
session_cache_2 2.499GB
session_cache_3 2.499GB
session_cache_4 2.499GB

Step 6. Ensure that the db path now contains all the data locally inside the sessionmgr. You can

check the respective data path of the replica set. In this case it is /var/data/sessions.1/set01e.

[root@lab-1-sessionmgr05 set01~]# cd /var/data/sessions.1/set01e [root@lab-1-sessionmgr05 set01e]# ls admin session_cache session_cache_2.1 session_cache_2.7 session_cache_3.1 session_cache_3.7 session_cache_4.1 session_cache_4.7 session_cache_2.8 session_cache_3.2 session_cache_3.8 admin.0 session_cache.0 session_cache_2.2 session_cache_2.8 session_cache_3.2 session_cache_3.8 session_cache_4.2 session_cache_4.8 session_cache_2.ns session_cache_3.3 session_cache_3.ns session_cache_4.3 session_cache_4.ns _tmp config session_cache.2 session_cache_2.4 session_cache.3 session_cache_3.4 session_cache.4 session_cache_4.4 session_cache_2.5 session_cache_3 session_cache_3.5 session_cache_4 session_cache_4.5 session_cache_2.6 session_cache_3.0 session_cache_3.6 session_cache_4.0 session_cache_4.6 session_cache_3.0 session_cache_3.6 session_cache_4.0 session_cache_4.6 session_cache.7

Step 7. SSH to same site secondary member and perform local sync of data path with the primary member.

ssh to lab-1-sessionmgr06 (Secondary member)
Ensure to stop aido_client
monit stop aido_client

Ensure to stop mongo processes

/etc/init.d/sessionmgr-27737 stop # Wait for 10 seconds and start the service
back on

Ensure that the data path /var/data/sessions.1/set01e is empty and if it isn't, them remove with the use of **rm -rf /var/data/sessions.1/set01e/***, then start the mongo process.

/etc/init.d/sessionmgr-27737 start

```
[root@lab-1-sessionmgr06 ~]# monit stop aido_client
[root@lab-1-sessionmgr06 ~]# monit status aido_client
Monit 5.26.0 uptime: 52d 20h 59m
Process 'aido_client'
status Not monitored
monitoring status Not monitored
monitoring mode active
on reboot start
data collected Wed, 23 Mar 2022 08:08:46
[root@lab-1-sessionmgr06 ~]#
[root@lab-1-sessionmgr06 ~]# /etc/init.d/sessionmgr-27737 stop
stop sessionmgr-27737 (via systemctl): [ OK ]
[root@lab-1-sessionmgr06 ~]# rm -rf /var/data/sessions.1/set01e/*
[root@lab-1-sessionmgr06 ~]# cd /var/data/sessions.1/set01e/
[root@lab-1-sessionmgr06 set01e]# ls
[root@lab-1-sessionmgr06 set01e]#
[root@lab-1-sessionmgr06 set01e]# /etc/init.d/sessionmgr-27737 start
Starting sessionmgr-27737 (via systemctl): [ OK ]
Step 8. Verify that the data is now locally copied to /var/data/sessions.1/set01e.
```

```
[root@lab-1-sessionmgr06 ~l# cd /var/data/sessions.1/set0le/
[root@lab-1-sessionmgr06 set0le]# ls
admin.0 local.1 local.3 local.7 mongod.lock session_cache_2.3 session_cache_2.7
session_cache_3.1 session_cache_3.5 session_cache_3.ns
admin.ns local.10 local.4 local.8 session_cache_2.0 session_cache_2.4 session_cache_2.8
session_cache_3.2 session_cache_3.6 storage.bson
diagnostic.data local.11 local.5 local.9 session_cache_2.1 session_cache_2.5 session_cache_2.ns
session_cache_3.3 session_cache_3.7 _tmp
local.0 local.2 local.6 local.ns session_cache_2.2 session_cache_2.6 session_cache_3.0
session_cache_3.4 session_cache_3.8
[root@lab-1-sessionmgr06 set01e]#
```

Note: Repeat Step 7. and Step 8. for geo site secondary members. Here in lab, the members are lab-2-sessionmgr05 and lab-2-sessionmgr06.

Step 9. Once all the secondary DBs are recovered (local and geo site), then restart the mongo service on the primary member.

```
[root@lab-1-sessionmgr05 ~]# /etc/init.d/sessionmgr-27737 stop
stop sessionmgr-27737 (via systemctl): [ OK ]
Wait for 10 seconds and confirm that the primary switch over is successful.
```

```
[root@lab-1-sessionmgr06 ~]# mongo --port 27737
MongoDB shell version v3.6.17
connect to: mongodb://127.0.0.1:27737/?gssapiServiceName=mongodb
Implicit session: session { "id" : UUID("ba8e49fa-ad0f-4ac6-8ef8-b4da0a88fe33") }
MongoDB server version: 3.6.17
Server has startup warnings:
2022-03-15T02:54:29.546-0300 I CONTROL [initandlisten]
2022-03-15T02:54:29.546-0300 I CONTROL [initandlisten] ** WARNING: Access control is not enabled
for the database.
2022-03-15T02:54:29.546-0300 I CONTROL [initandlisten] ** Read and write access to data and
configuration is unrestricted.
2022-03-15T02:54:29.546-0300 I CONTROL [initandlisten] **
2022-03-15T02:54:29.546-0300 I CONTROL [initandlisten]
set01e:PRIMARY>
set01e:PRIMARY>
set01e:PRIMARY> show dbs
admin 0.031GB
config 0.031GB
local 5.029GB
session_cache 2.499GB
session_cache_2 2.499GB
session_cache_3 2.499GB
session_cache_4 2.499GB
set01e:PRIMARY> show dbs
admin 0.031GB
config 0.031GB
local 5.029GB
session_cache 2.499GB
session_cache_2 2.499GB
session_cache_3 2.499GB
session_cache_4 2.499GB
set01e:PRIMARY> rs.status()
{
"set" : "set01e",
"date" : ISODate("2022-03-15T06:13:19.991Z"),
"myState" : 1,
```

```
"term" : NumberLong(36),
"syncingTo" : "",
"syncSourceHost" : "",
"syncSourceId" : -1,
"heartbeatIntervalMillis" : NumberLong(2000),
"optimes" : {
"lastCommittedOpTime" : {
"ts" : Timestamp(1647324799, 335),
"t" : NumberLong(36)
},
"readConcernMajorityOpTime" : {
"ts" : Timestamp(1647324799, 335),
"t" : NumberLong(36)
},
"appliedOpTime" : {
"ts" : Timestamp(1647324799, 338),
"t" : NumberLong(36)
},
"durableOpTime" : {
"ts" : Timestamp(0, 0),
"t" : NumberLong(-1)
}
},
"members" : [
{
"_id" : 0,
"name" : "lab-2-sessionmgr06:27737",
"health" : 1,
"state" : 2,
"stateStr" : "SECONDARY",
"uptime" : 486,
"optime" : {
"ts" : Timestamp(1647324799, 94),
"t" : NumberLong(36)
},
"optimeDurable" : {
"ts" : Timestamp(0, 0),
"t" : NumberLong(-1)
},
"optimeDate" : ISODate("2022-03-15T06:13:19Z"),
"optimeDurableDate" : ISODate("1970-01-01T00:00:00Z"),
"lastHeartbeat" : ISODate("2022-03-15T06:13:19.267Z"),
"lastHeartbeatRecv" : ISODate("2022-03-15T06:13:18.270Z"),
"pingMs" : NumberLong(0),
"lastHeartbeatMessage" : "",
"syncingTo" : "lab-1-sessionmgr06:27737",
"syncSourceHost" : "lab-1-sessionmgr06:27737",
"syncSourceId" : 4,
"infoMessage" : "",
"configVersion" : 8
},
{
"_id" : 1,
"name" : "lab-1-sessionmgr05:27737",
"health" : 1,
"state" : 2,
"stateStr" : "SECONDARY",
"uptime" : 885,
"optime" : {
"ts" : Timestamp(1647324799, 96),
"t" : NumberLong(36)
},
"optimeDurable" : {
"ts" : Timestamp(0, 0),
```

```
"t" : NumberLong(-1)
},
"optimeDate" : ISODate("2022-03-15T06:13:19Z"),
"optimeDurableDate" : ISODate("1970-01-01T00:00:00Z"),
"lastHeartbeat" : ISODate("2022-03-15T06:13:19.270Z"),
"lastHeartbeatRecv" : ISODate("2022-03-15T06:13:18.270Z"),
"pingMs" : NumberLong(0),
"lastHeartbeatMessage" : "",
"syncingTo" : "lab-1-sessionmgr06:27737",
"syncSourceHost" : "lab-1-sessionmgr06:27737",
"syncSourceId" : 4,
"infoMessage" : "",
"configVersion" : 8
},
{
"_id" : 2,
"name" : "lab-1-arb-sessmgr15:27737",
"health" : 1,
"state" : 7,
"stateStr" : "ARBITER",
"uptime" : 1130,
"lastHeartbeat" : ISODate("2022-03-15T06:13:19.240Z"),
"lastHeartbeatRecv" : ISODate("2022-03-15T06:13:18.856Z"),
"pingMs" : NumberLong(0),
"lastHeartbeatMessage" : "",
"syncingTo" : "",
"syncSourceHost" : "",
"syncSourceId" : -1,
"infoMessage" : "",
"configVersion" : 8
},
{
"_id" : 3,
"name" : "lab-1-sessionmgr05:27737",
"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("2022-03-15T06:13:19.299Z"),
"lastHeartbeatRecv" : ISODate("2022-03-15T06:11:58.086Z"),
"pingMs" : NumberLong(0),
"lastHeartbeatMessage" : "Connection refused",
"syncingTo" : "",
"syncSourceHost" : "",
"syncSourceId" : -1,
"infoMessage" : "",
"configVersion" : -1
},
{
"_id" : 4,
"name" : "lab-1-sessionmgr06:27737",
"health" : 1,
"state" : 1,
"stateStr" : "PRIMARY",
```

```
"uptime" : 1130,
"optime" : {
"ts" : Timestamp(1647324799, 338),
"t" : NumberLong(36)
},
"optimeDate" : ISODate("2022-03-15T06:13:19Z"),
"syncingTo" : "",
"syncSourceHost" : "",
"syncSourceId" : -1,
"infoMessage" : "",
"electionTime" : Timestamp(1647324719, 72),
"electionDate" : ISODate("2022-03-15T06:11:59Z"),
"configVersion" : 8,
"self" : true,
"lastHeartbeatMessage" : ""
}
],
"ok" : 1,
"operationTime" : Timestamp(1647324799, 338),
"$clusterTime" : {
"clusterTime" : Timestamp(1647324799, 338),
"signature" : {
"hash" : BinData(0, "AAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
"keyId" : NumberLong(0)
}
}
}
```

Step 10. Restart the mongo service on lab-1-sessionmgr05, which was the primary member earlier.

```
[root@lab-1-sessionmgr05 ~]# /etc/init.d/sessionmgr-27737 start
Starting sessionmgr-27737 (via systemctl): [ OK ]
```

Step 11. Start the aido_client on all the replica members of the set01e replica set which was stopped in Step 2.