Creating MongoDB Replica Set

MacOS / Linux(only dbpath changes)

1. Setting Up MongoDB Data Directory

- The location of the MongoDB data directory varies based on your Apple Processor:

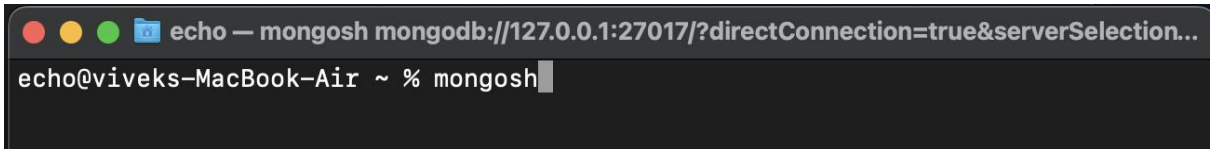
	Intel Processor	Apple Silicon Processor
configuration file	`/usr/local/etc/mongod.conf`	`/opt/homebrew/etc/mongod.conf`
`log directory`	`/usr/local/var/log/mongodb`	`/opt/homebrew/var/log/mongodb`
`data directory`	`/usr/local/var/mongodb`	`/opt/homebrew/var/mongodb`

- For Intel Processor: The path is /usr/local/var/mongodb.
- For Apple Silicon Processor: The path is /opt/homebrew/var/mongodb.

2. Preparing for Replica Set Configuration

Before creating the replica set, you need to close the standalone instance of your running MongoDB server. Follow these steps:

- Start the mongoshell server.



- To close the running instance, enter *db.shutdownServer()* and press Enter.

- You'll receive a confirmation message.

- Type *exit* and press Enter to exit the mongosh shell.

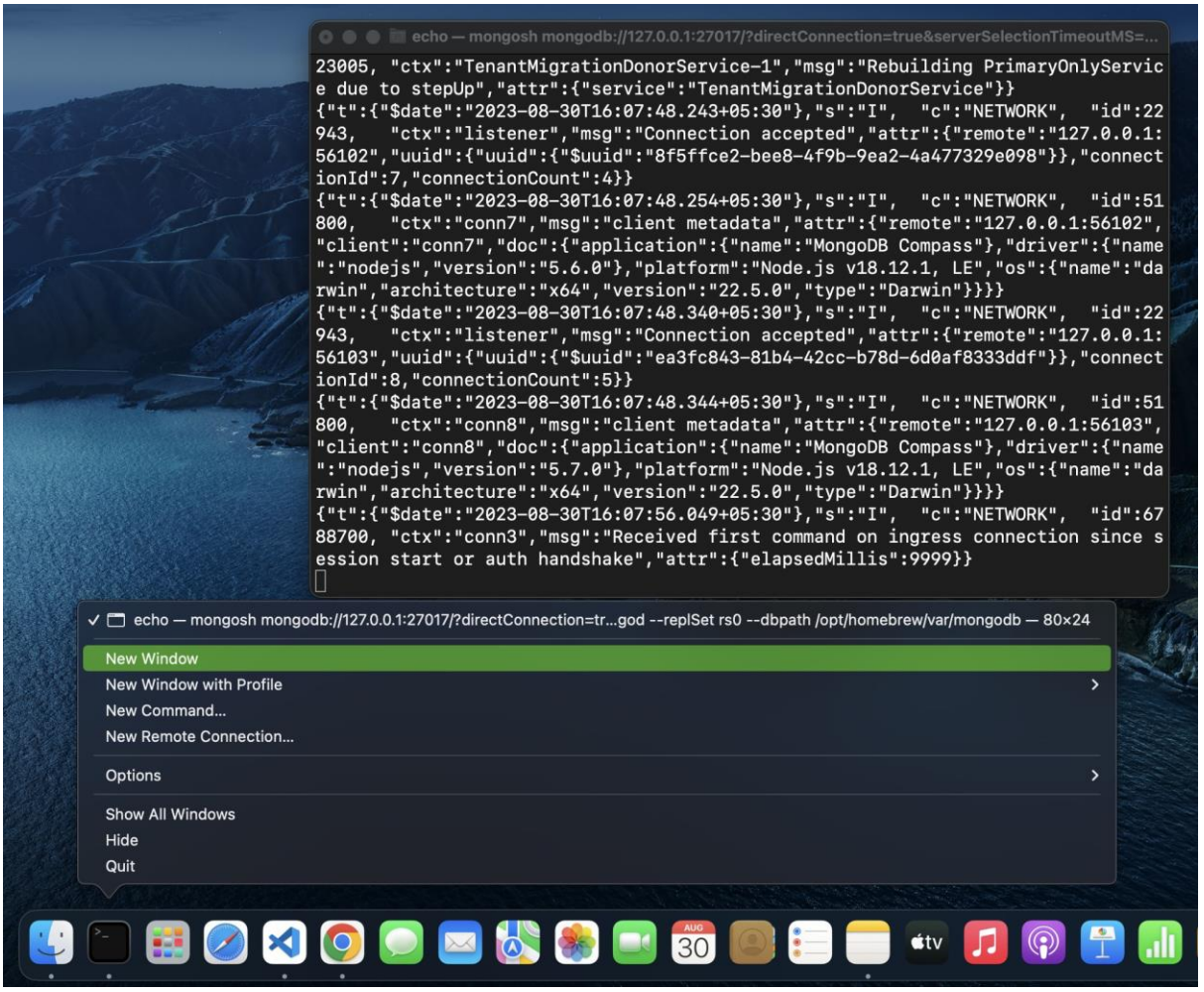
3. Starting the Replica Set Server

1. To start the replica set, use the following command:
    - For Apple Silicon Processor: *mongod --replSet rs0 --dbpath /opt/homebrew/var/mongodb*
    - For Intel Processor: *mongod --replSet rs0 --dbpath /usr/local/var/mongodb*

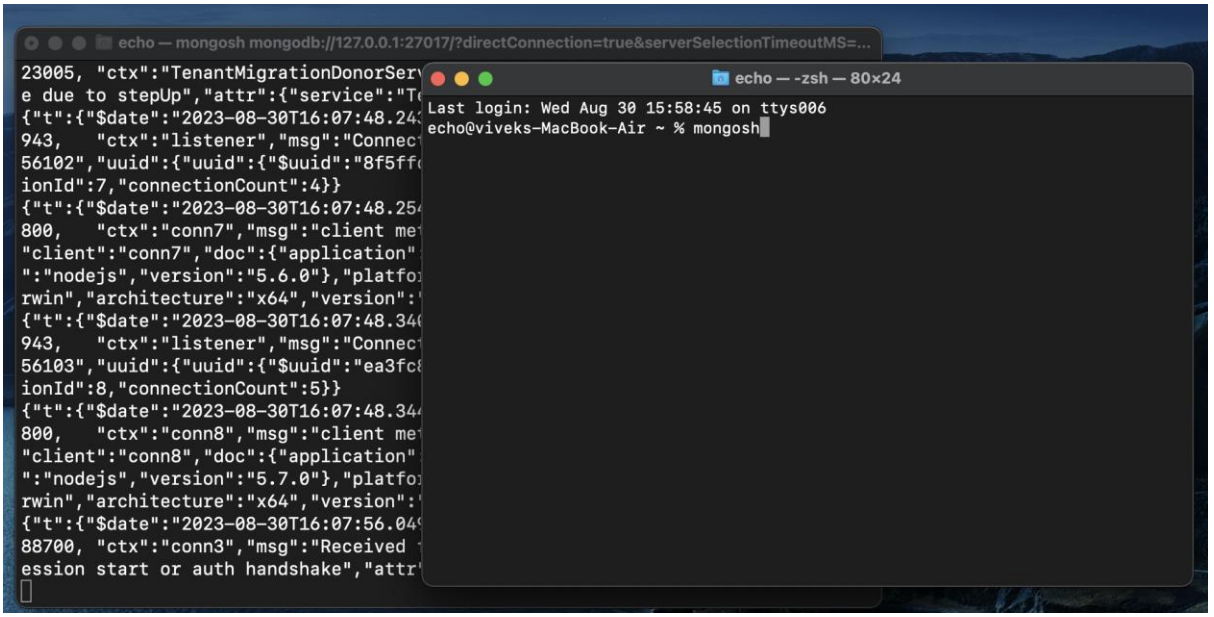
2. Press Enter to start the server for the replica set.

4. Initializing the Replica Set

- Keep the previous terminal with the running server open, and open a new terminal.

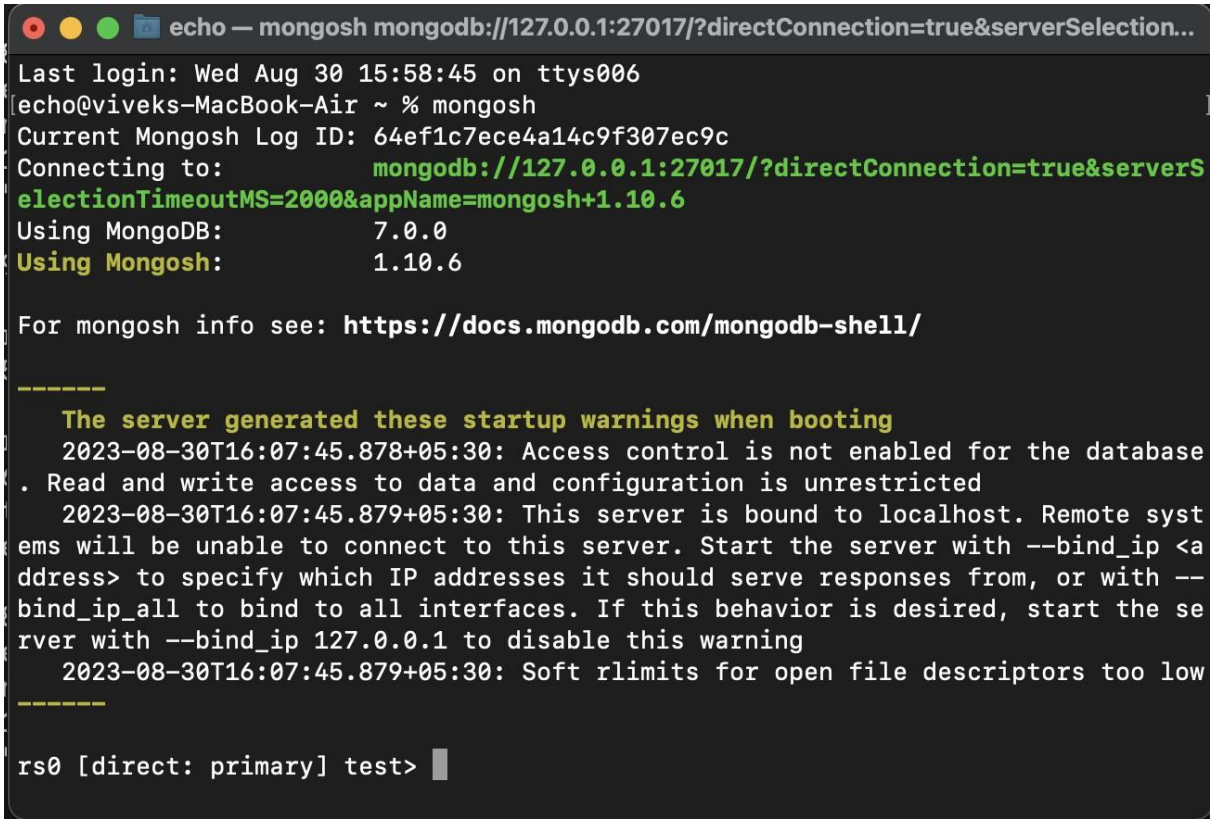


- In the new terminal, enter *mongosh* and press Enter.



- The mongoshell will start. Enter *rs.initiate()* and press Enter.

- The 'rs0' instance of the replica set will begin initialization.

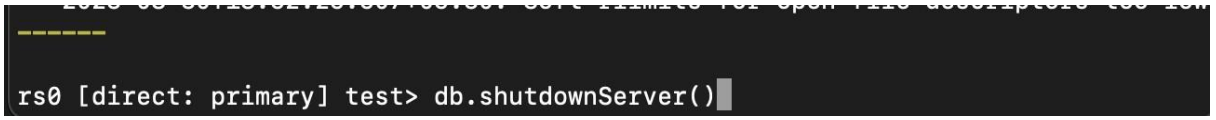


5. Note:

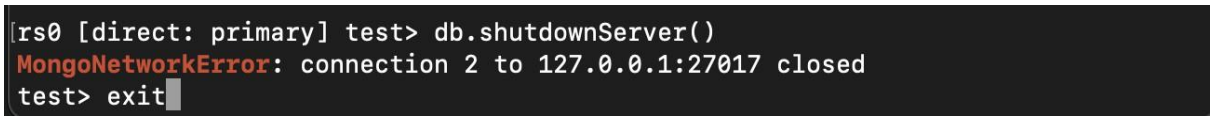
- If you encounter any errors during the process, consider uninstalling MongoDB, then reinstall and follow the steps outlined above.
- Make sure to remove all existing MongoDB-related files, including configuration and data directory files, after uninstallation.

6. Closing the MongoDB Replica Set

- To close the running replica set instance, enter db.shutdownServer() in the mongo shell and press Enter.



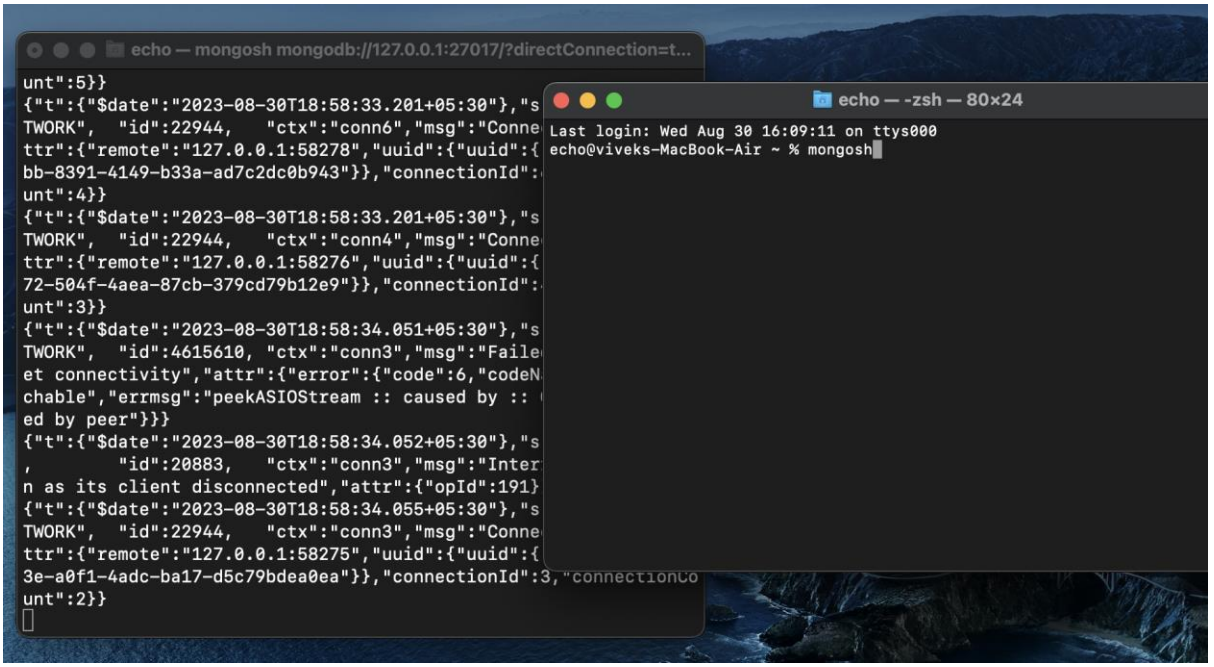
- Exit the mongoshell.



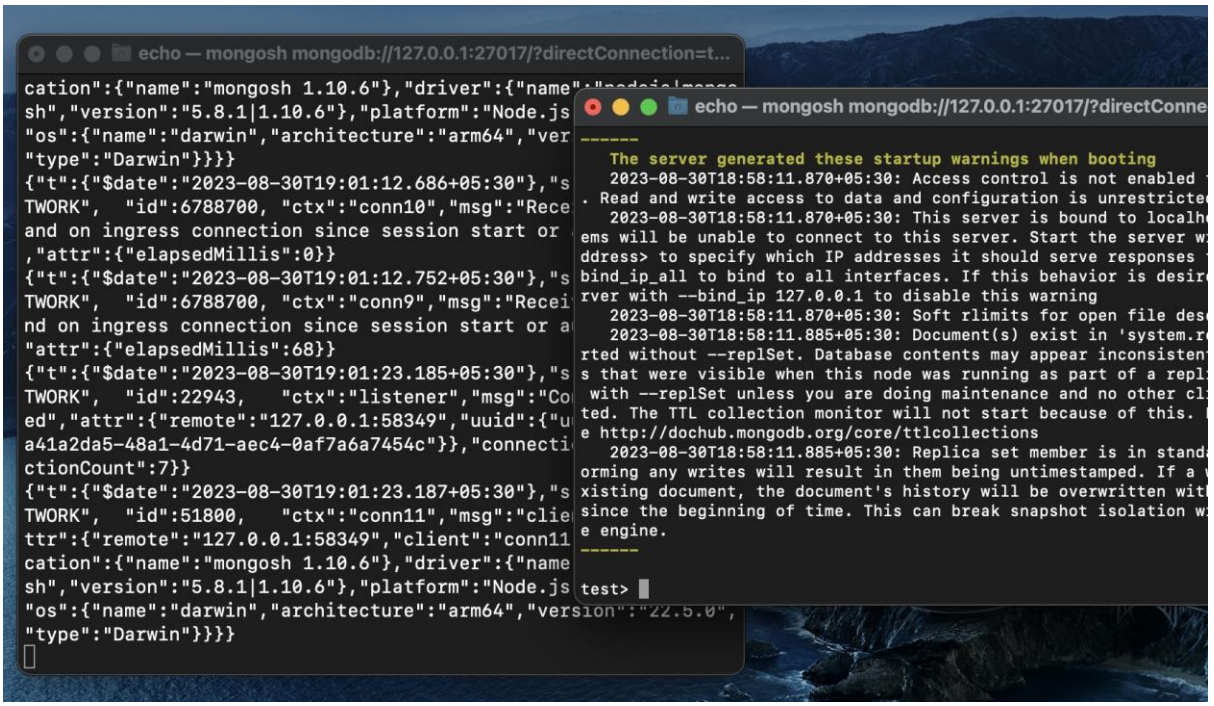
Starting the Standalone MongoDB Server

- Start the standalone MongoDB server using the command *mongod --dbpath /opt/homebrew/var/mongodb/*.

- Open a new terminal window while keeping the previous mongosh shell open.



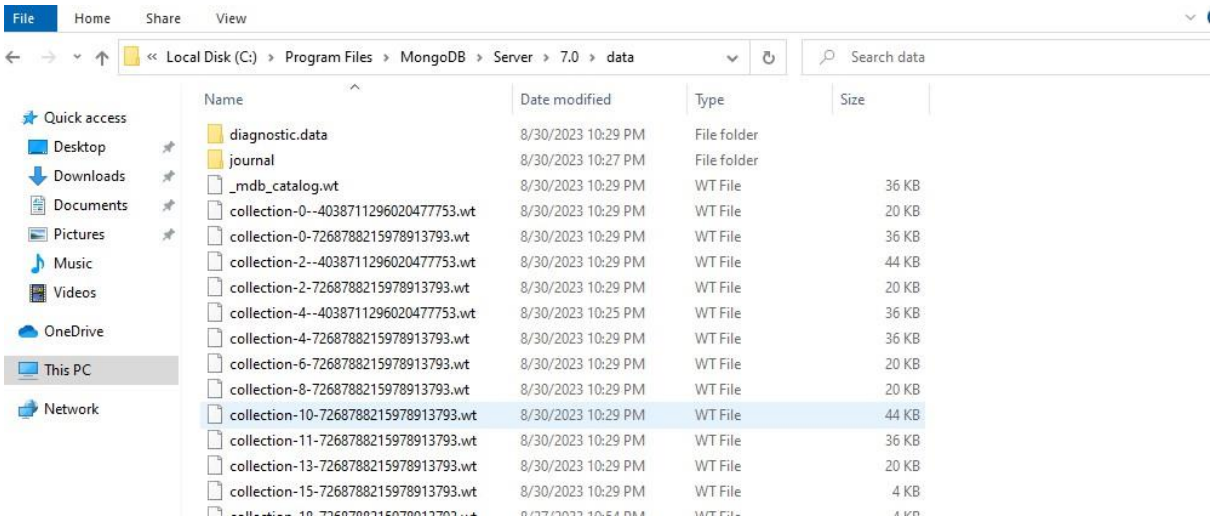
- You will now be in the standalone server context.



Windows

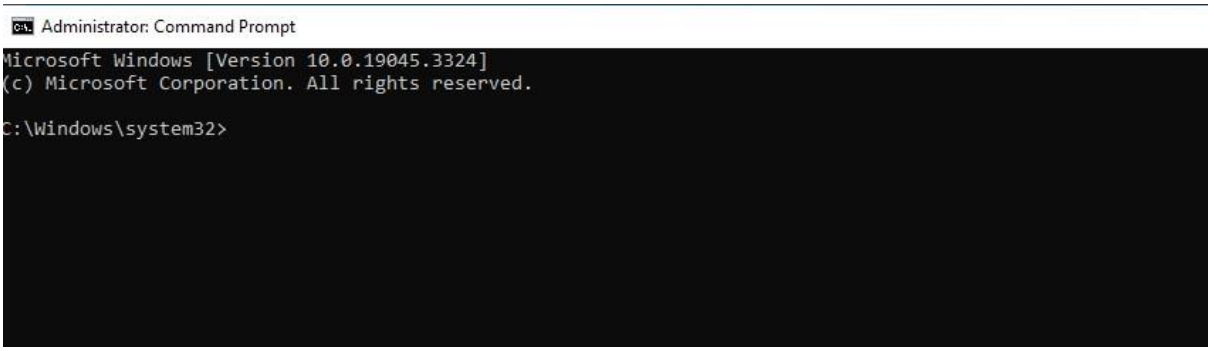
1. Setting Up MongoDB Data Directory

- The "data directory" specifically refers to the location where MongoDB stores its data.
  In Windows, the location might vary, but you need to get to this **“data”** directory and note down the path.

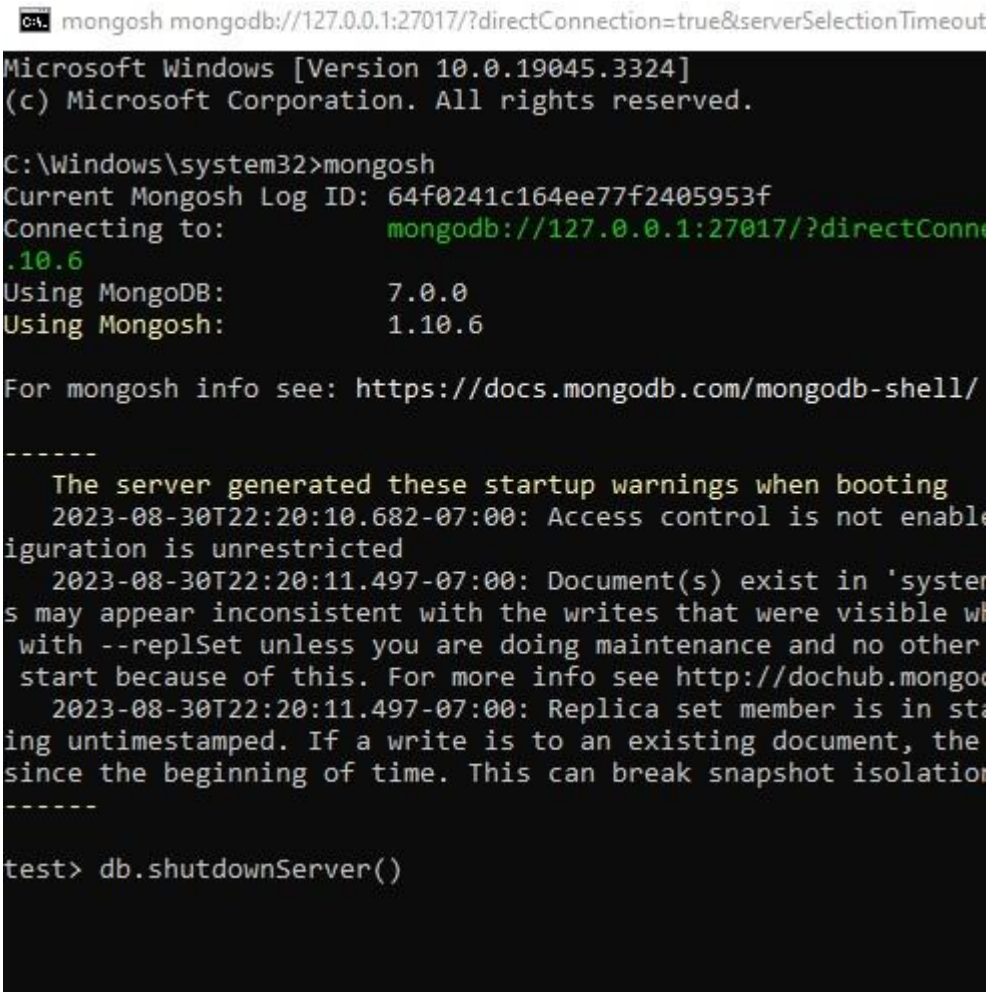


2. Setting Up Replication:

- Firstly, open the command prompt as **Administrator.**



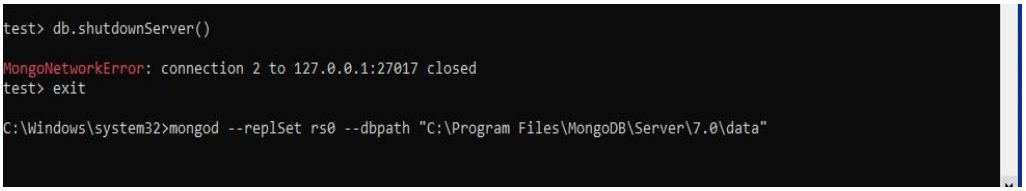
- Get inside the Mongo shell by using the command: **mongosh**
- Then we need to stop the running server by using the command: **db.shutdownServer()**



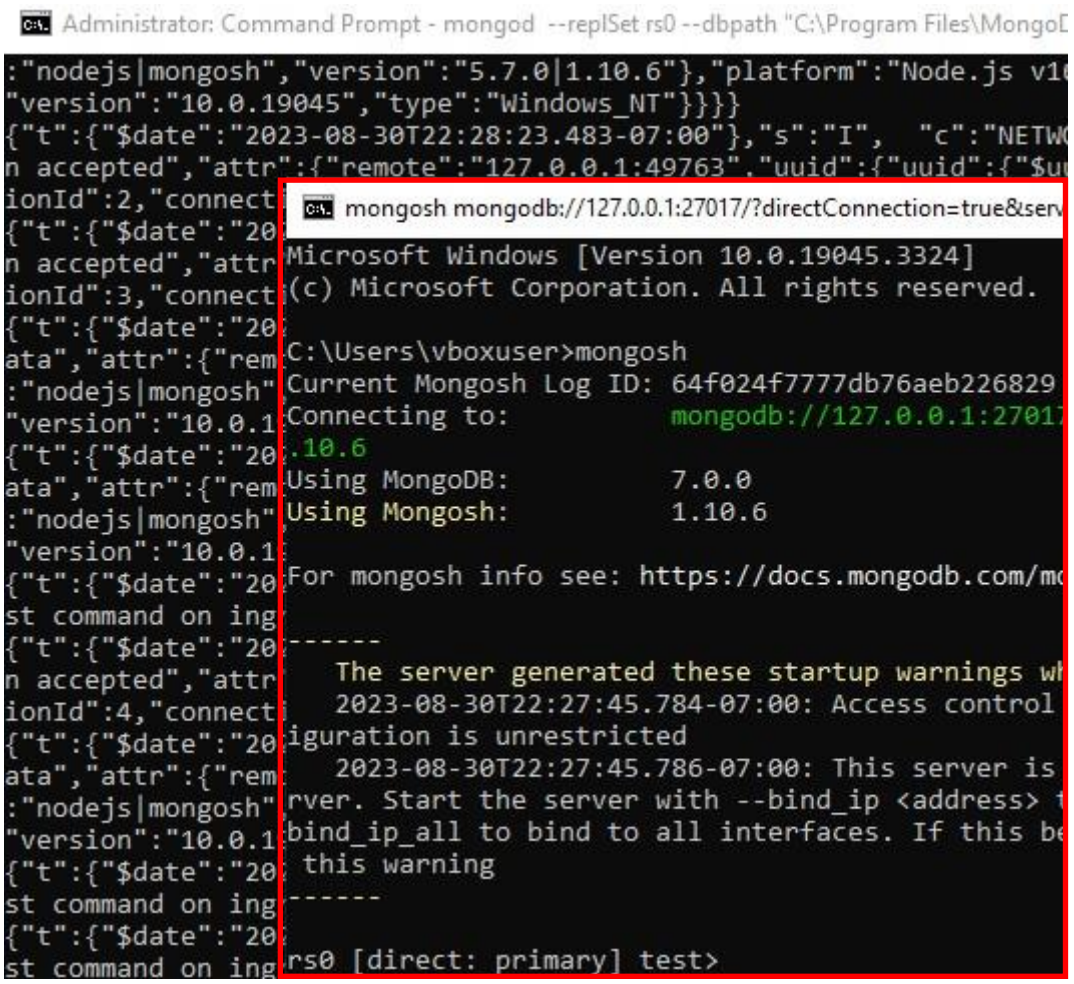
- Now exit the Mongo shell using the command: **exit**

- You can now start the new “mongod” relocation server using the below command:
  mongod —replSet rs0 –dbpath “C:\Program Files\MongoDB\Server\7.0\data”

  Note: dbpath in the above command might vary. **“rs0”** is the replica set name, and dbpath is the location where replica data is going to be. **DON'T CLOSE THIS RUNNING COMMAND LINE!!!**



- Now, your replica server is running. Now you can open in a new Mongo shell and start using rs0 by typing in the command:
  rs.initiate()



- If you encounter any errors during this process, Modify the MongoDB connection URL to match the one specified in the **"Connecting to"** section, which should start with "`mongodb://127.0.0...10.6`"

NOTE: Falling back if an error arises,

- In case any error arises, you can revert back by executing the below commands:

    - Open the command line as **Administrator**
    - First stop the MongoDB service:
      net stop MongoDB
    - Secondly, start MongoDB service:
      net start MongoDB

- You should reach the original state now.