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Practical 5: Sharding using MongoDB

Create a folder and in that folder make 9 files/folders with names -> primary, secondary1, secondary2, server1, server2, server3, shard1, shard2, shard3 and run the commands mentioned below

REPLICATION

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**\*\*OPEN CMD AND RUN FOLLOWING COMMANDS\*\***

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```
C:\Users\LENOVO>cd C:\mongoshard
```

```
start mongod --port=50000 --replSet="Server1" --dbpath="C:\mongoshard\primary"
```

```
start mongod --port=50001 --replSet="Server1" --dbpath="C:\mongoshard\secondary1"
```

```
start mongod --port=50002 --replSet="Server1" --dbpath="C:\mongoshard\secondary2"
```

****OPEN CMD AND RUN FOLLOWING COMMANDS****

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Microsoft Windows [Version 10.0.22621.3155]

(c) Microsoft Corporation. All rights reserved.

```
C:\Users\LENOVO>mongosh --port=50000
```

Current Mongosh Log ID: 65f08313daf480d082a47e42

Connecting to:  
mongodb://127.0.0.1:50000/?directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+2.1.5

Using MongoDB: 7.0.5

Using Mongosh: 2.1.5

For mongosh info see: <https://docs.mongodb.com/mongodb-shell/>

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The server generated these startup warnings when booting

2024-03-12T21:59:01.395+05:30: Access control is not enabled for the database. Read and write access to data and configuration is unrestricted

2024-03-12T21:59:01.396+05:30: This server is bound to localhost. Remote systems will be unable to connect to this server. Start the server with --bind\_ip <address> to specify which IP addresses it should serve responses from, or with --bind\_ip\_all to bind to all interfaces. If this behavior is desired, start the server with --bind\_ip 127.0.0.1 to disable this warning

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```
test> rs.initiate({
...   _id:"Server1",
...   members:[
...     { _id:0, host:"localhost:50000"},
...     { _id:1, host:"localhost:50001"},
...     { _id:2, host:"localhost:50002"}
...   ]
... });
{ ok: 1 }
```

Server1 [direct: secondary] test>

CONFIG SERVERS

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****OPEN CMD AND RUN FOLLOWING COMMANDS****

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C:\Users\LENOVO>cd C:\mogoshard

start mongod --configsvr --port=1030 --replSet="Server1" --dbpath="C:\mogoshard\server1"

start mongod --configsvr --port=1040 --replSet="Server1" --dbpath="C:\mogoshard\server2"

start mongod --configsvr --port=1050 --replSet="Server1" --dbpath="C:\mogoshard\server3"

**\*\*OPEN CMD AND RUN FOLLOWING COMMANDS\*\***

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Microsoft Windows [Version 10.0.22621.3155]

(c) Microsoft Corporation. All rights reserved.

C:\Users\LENOVO>mongosh --host="localhost:1030"

Current Mongosh Log ID: 65f084803e226f2421899c2c

Connecting to:

mongodb://localhost:1030/?directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+2.1.5

Using MongoDB: 7.0.5

Using Mongosh: 2.1.5

For mongosh info see: <https://docs.mongodb.com/mongosh-shell/>

The server generated these startup warnings when booting

2024-03-12T22:04:01.822+05:30: Access control is not enabled for the database. Read and write access to data and configuration is unrestricted

2024-03-12T22:04:01.823+05:30: This server is bound to localhost. Remote systems will be unable to connect to this server. Start the server with --bind_ip <address> to specify which IP addresses it should serve responses from, or with --bind_ip_all to bind to all interfaces. If this behavior is desired, start the server with --bind_ip 127.0.0.1 to disable this warning

```
test> rs.initiate({
...   _id:"Server1",
...   configsvr:true,
...   members:[
...     { _id:0, host:"localhost:1030"},
...     { _id:1, host:"localhost:1040"},
...     { _id:2, host:"localhost:1050"}
...   ]
... })
{ ok: 1 }
```

Server1 [direct: other] test>

SHARDS

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**\*\*OPEN CMD AND RUN FOLLOWING COMMANDS\*\***

~~~~~

C:\Users\LENOVO>cd C:\mogoshard

start mongod --shardsvr --port=1130 --dbpath="C:\mongoshard\shard1" --replSet="Server1"

start mongod --shardsvr --port=1140 --dbpath="C:\mongoshard\shard2" --replSet="Server1"

start mongod --shardsvr --port=1150 --dbpath="C:\mongoshard\shard3" --replSet="Server1"

****OPEN CMD AND RUN FOLLOWING COMMANDS****

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Microsoft Windows [Version 10.0.22621.3155]

(c) Microsoft Corporation. All rights reserved.

C:\Users\LENOVO>mongosh --host="localhost:1130"

Current Mongosh Log ID: 65f0868d80f995ab2c101aae

Connecting to:

mongodb://localhost:1130/?directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+2.1.5

Using MongoDB: 7.0.5

Using Mongosh: 2.1.5

For mongosh info see: <https://docs.mongodb.com/mongodb-shell/>

-----

The server generated these startup warnings when booting

2024-03-12T22:13:29.993+05:30: Access control is not enabled for the database. Read and write access to data and configuration is unrestricted

2024-03-12T22:13:29.994+05:30: This server is bound to localhost. Remote systems will be unable to connect to this server. Start the server with --bind\_ip <address> to specify which IP addresses it should serve responses from, or with --bind\_ip\_all to bind to all interfaces. If this behavior is desired, start the server with --bind\_ip 127.0.0.1 to disable this warning

-----

test> rs.initiate({

... \_id:"Server1",

... members: [

... { \_id: 0, host: "localhost:1130"},

```
...    { _id: 1, host: "localhost:1140"},  
...    { _id: 2, host: "localhost:1150"}  
...  ]  
... })  
{ ok: 1 }  
Server1 [direct: other] test>
```