Practical-5: Replication using Mangodb

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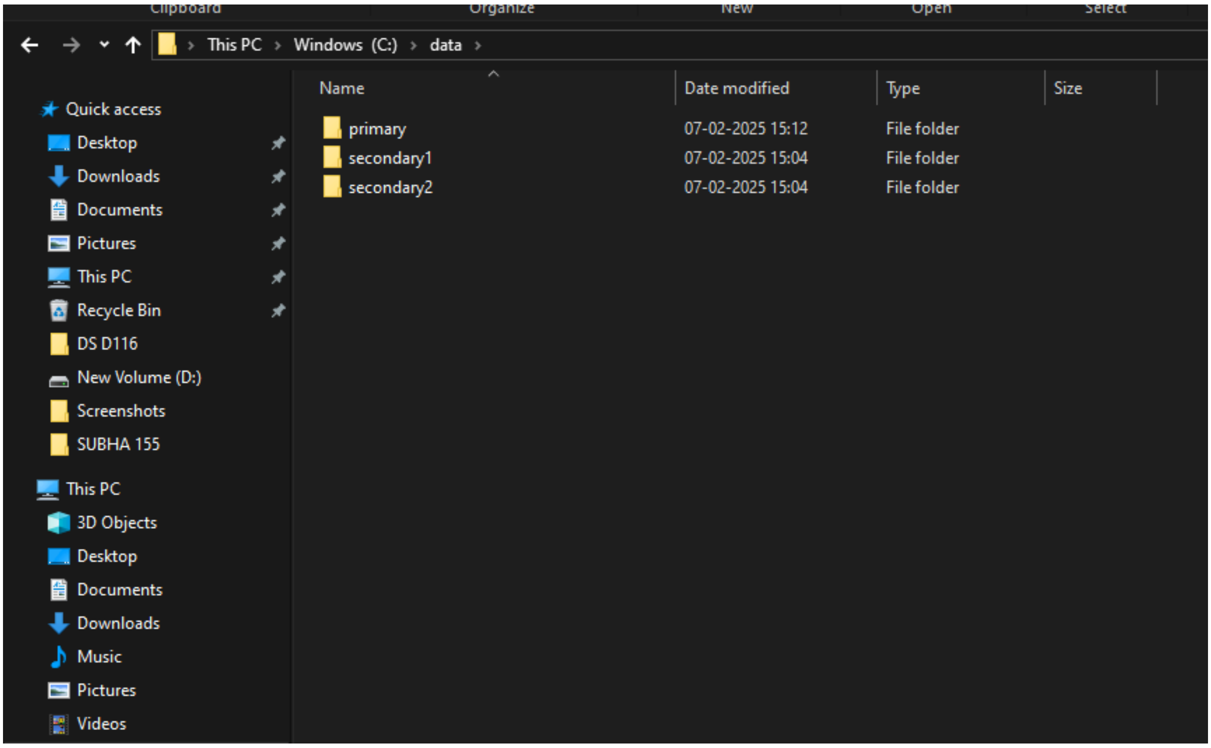
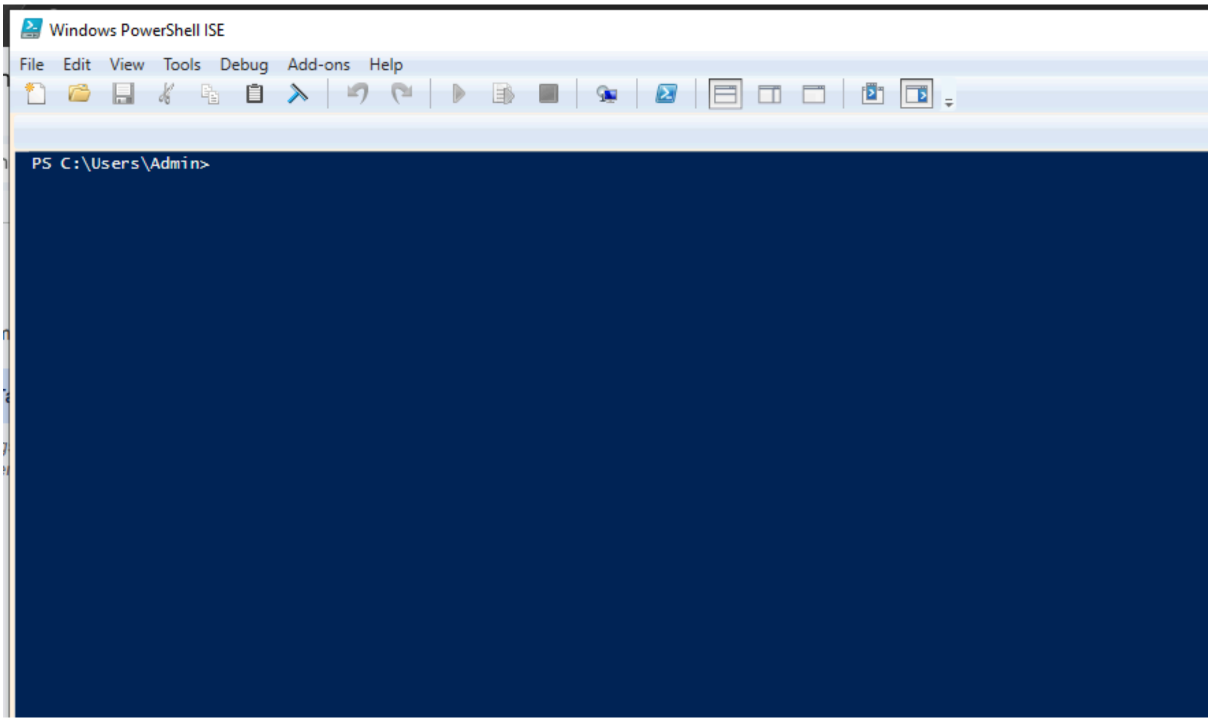
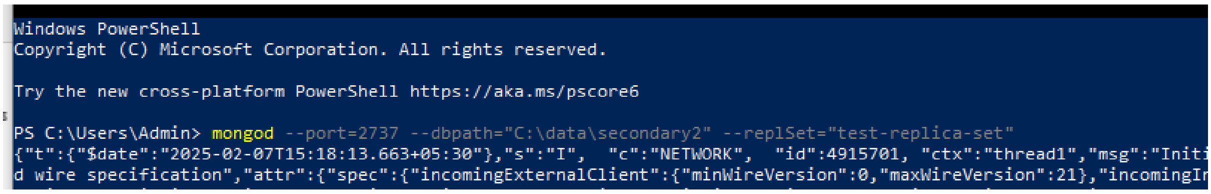


Name	Date modified	Type	Size
primary	07-02-2025 15:12	File folder	
secondary1	07-02-2025 15:04	File folder	
secondary2	07-02-2025 15:04	File folder	



```
PS C:\Users\Admin>
```



```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\Admin> mongod --port=2737 --dbpath="C:\data\secondary2" --replSet="test-replica-set"
{"t":{"$date":"2025-02-07T15:18:13.663+05:30"},"s":"I",  "c":"NETWORK",  "id":4915701, "ctx":"thread1","msg":"Initi
d wire specification","attr":{"spec":{"incomingExternalClient":{"minWireVersion":0,"maxWireVersion":21},"incomingIn
```

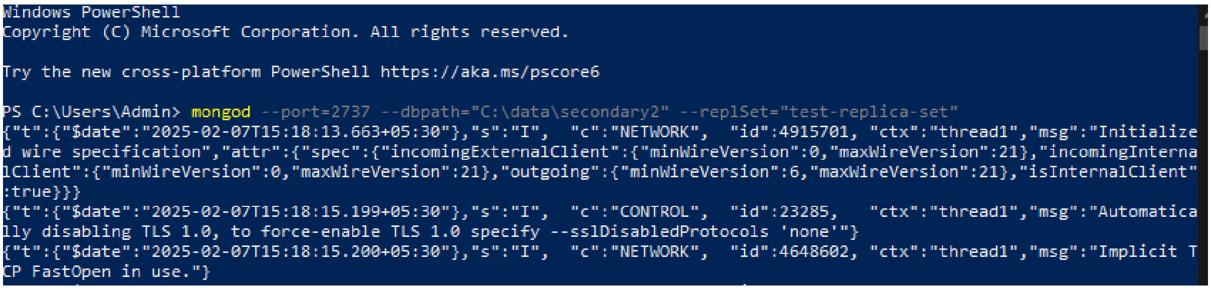

```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\Admin> mongod --port=2737 --dbpath="C:\data\secondary2" --replSet="test-replica-set"
{"t":{"$date":"2025-02-07T15:18:13.663+05:30"},"s":"I",  "c":"NETWORK",  "id":4915701, "ctx":"thread1","msg":"Initialize
d wire specification","attr":{"spec":{"incomingExternalClient":{"minWireVersion":0,"maxWireVersion":21},"incomingInterna
lClient":{"minWireVersion":0,"maxWireVersion":21},"outgoing":{"minWireVersion":6,"maxWireVersion":21},"isInternalClient"
:true}}}
{"t":{"$date":"2025-02-07T15:18:15.199+05:30"},"s":"I",  "c":"CONTROL",  "id":23285,   "ctx":"thread1","msg":"Automatica
lly disabling TLS 1.0, to force-enable TLS 1.0 specify --sslDisabledProtocols 'none'"}
{"t":{"$date":"2025-02-07T15:18:15.200+05:30"},"s":"I",  "c":"NETWORK",  "id":4648602, "ctx":"thread1","msg":"Implicit T
CP FastOpen in use."}
```
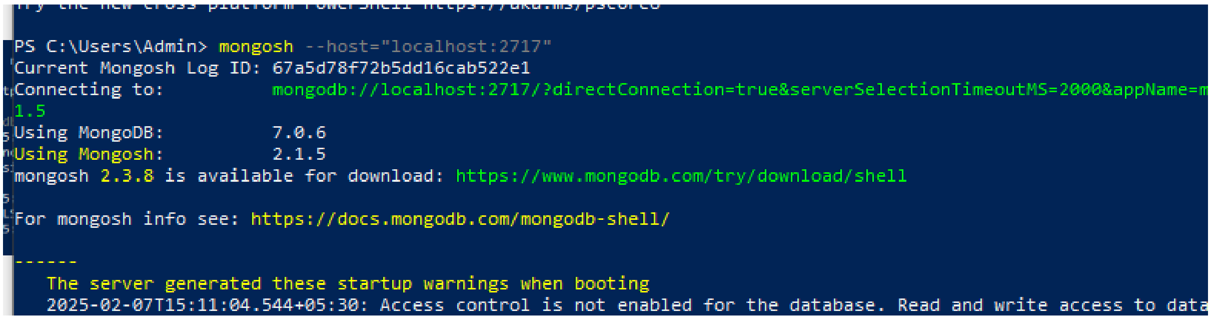
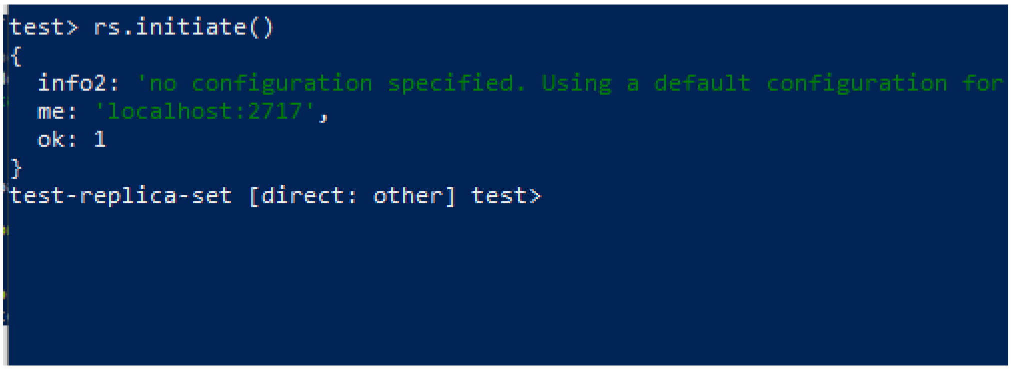
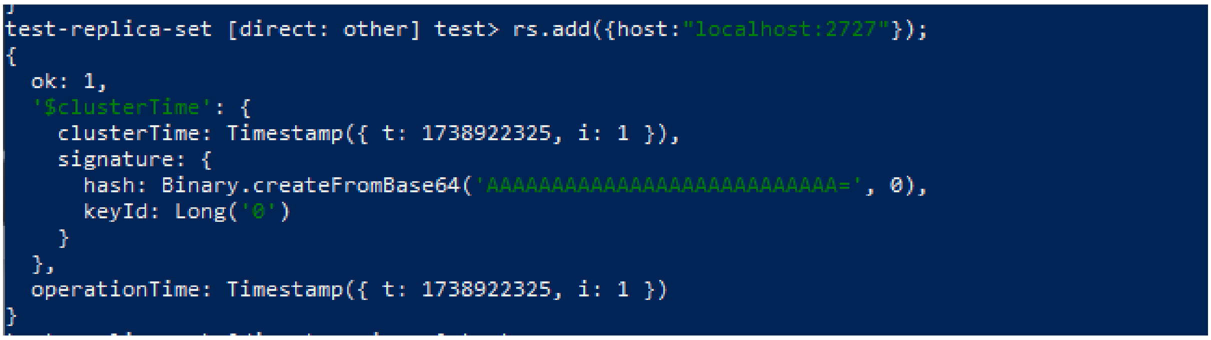



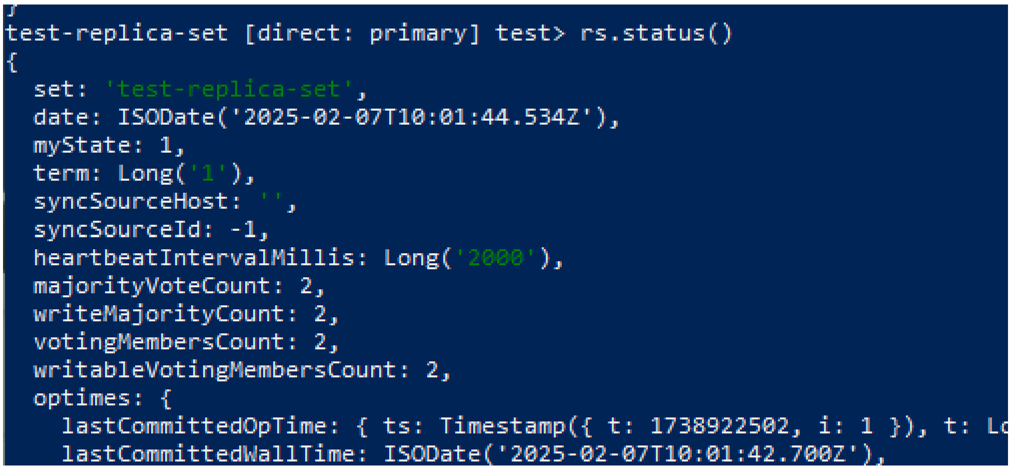
```
PS C:\Users\Admin> mongosh --host="localhost:2717"
Current Mongosh Log ID: 67a5d78f72b5dd16cab522e1
Connecting to:          mongodb://localhost:2717/?directConnection=true&serverSelectionTimeoutMS=2000&appName=m
1.5
Using MongoDB:          7.0.6
Using Mongosh:          2.1.5
mongosh 2.3.8 is available for download: https://www.mongodb.com/try/download/shell

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

------
   The server generated these startup warnings when booting
   2025-02-07T15:11:04.544+05:30: Access control is not enabled for the database. Read and write access to data
```



```
test> rs.initiate()
{
  info2: 'no configuration specified. Using a default configuration for
  me: 'localhost:2717',
  ok: 1
}
test-replica-set [direct: other] test>
```

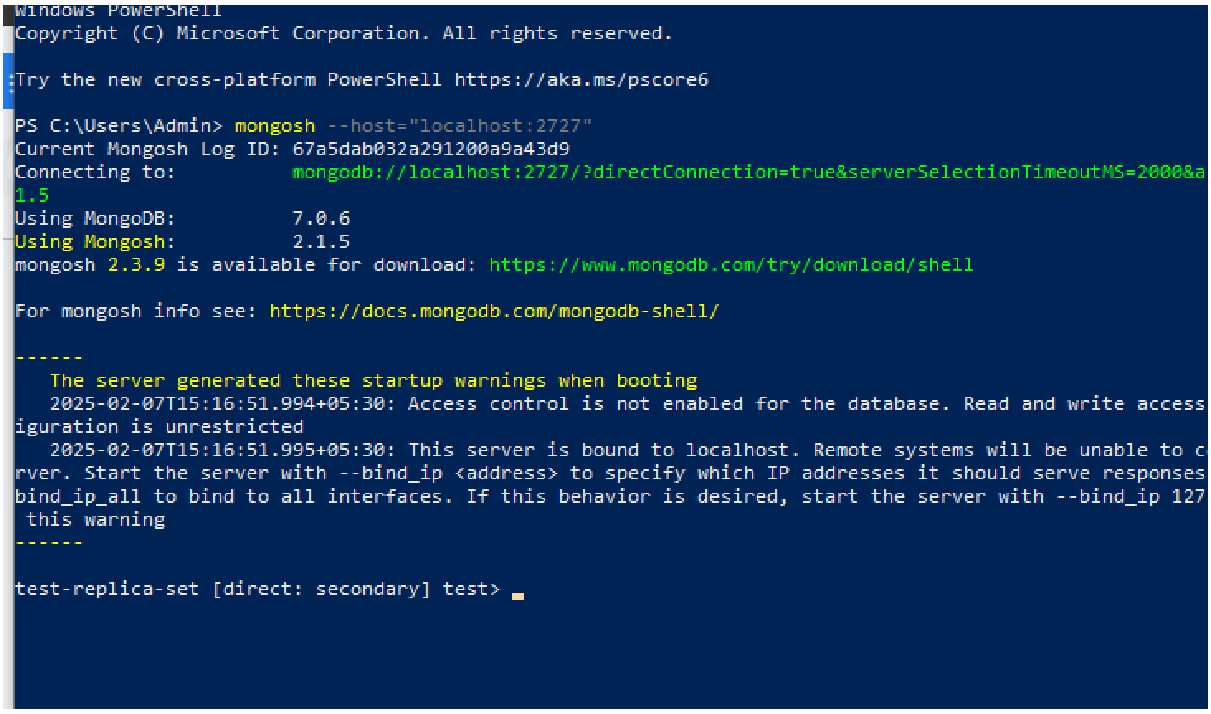


```
test-replica-set [direct: other] test> rs.add({host:"localhost:2727"});
{
  ok: 1,
  '$clusterTime': {
    clusterTime: Timestamp({ t: 1738922325, i: 1 }),
    signature: {
      hash: Binary.createFromBase64('AAAAAAAAAAAAAAAAAAAAAAAAAAA=', 0),
      keyId: Long('0')
    }
  },
  operationTime: Timestamp({ t: 1738922325, i: 1 })
}
```



```
}
test-replica-set [direct: primary] test> rs.status()
{
  set: 'test-replica-set',
  date: ISODate('2025-02-07T10:01:44.534Z'),
  myState: 1,
  term: Long('1'),
  syncSourceHost: '',
  syncSourceId: -1,
  heartbeatIntervalMillis: Long('2000'),
  majorityVoteCount: 2,
  writeMajorityCount: 2,
  votingMembersCount: 2,
  writableVotingMembersCount: 2,
  optimes: {
    lastCommittedOpTime: { ts: Timestamp({ t: 1738922502, i: 1 }), t: Lo
    lastCommittedWallTime: ISODate('2025-02-07T10:01:42.700Z'),
```

```
PS C:\Users\Admin>
```



```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\Admin> mongosh --host="localhost:2727"
Current Mongosh Log ID: 67a5dab032a291200a9a43d9
Connecting to:          mongodb://localhost:2727/?directConnection=true&serverSelectionTimeoutMS=2000&a
1.5
Using MongoDB:          7.0.6
Using Mongosh:          2.1.5
mongosh 2.3.9 is available for download: https://www.mongodb.com/try/download/shell

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

------
   The server generated these startup warnings when booting
   2025-02-07T15:16:51.994+05:30: Access control is not enabled for the database. Read and write access
iguration is unrestricted
   2025-02-07T15:16:51.995+05:30: This server is bound to localhost. Remote systems will be unable to c
rver. Start the server with --bind_ip <address> to specify which IP addresses it should serve responses
bind_ip_all to bind to all interfaces. If this behavior is desired, start the server with --bind_ip 127
 this warning
------

test-replica-set [direct: secondary] test>
```
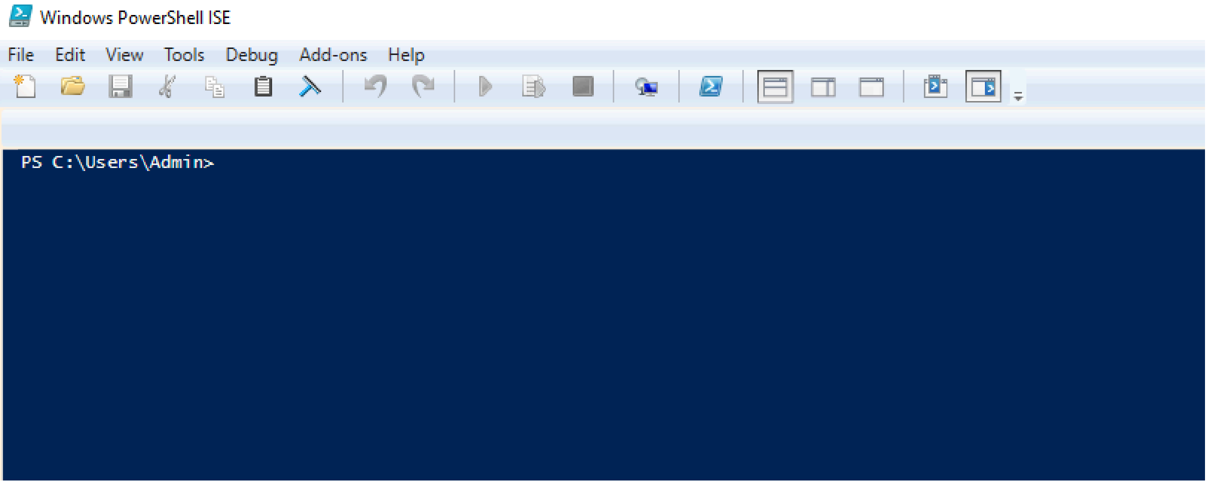
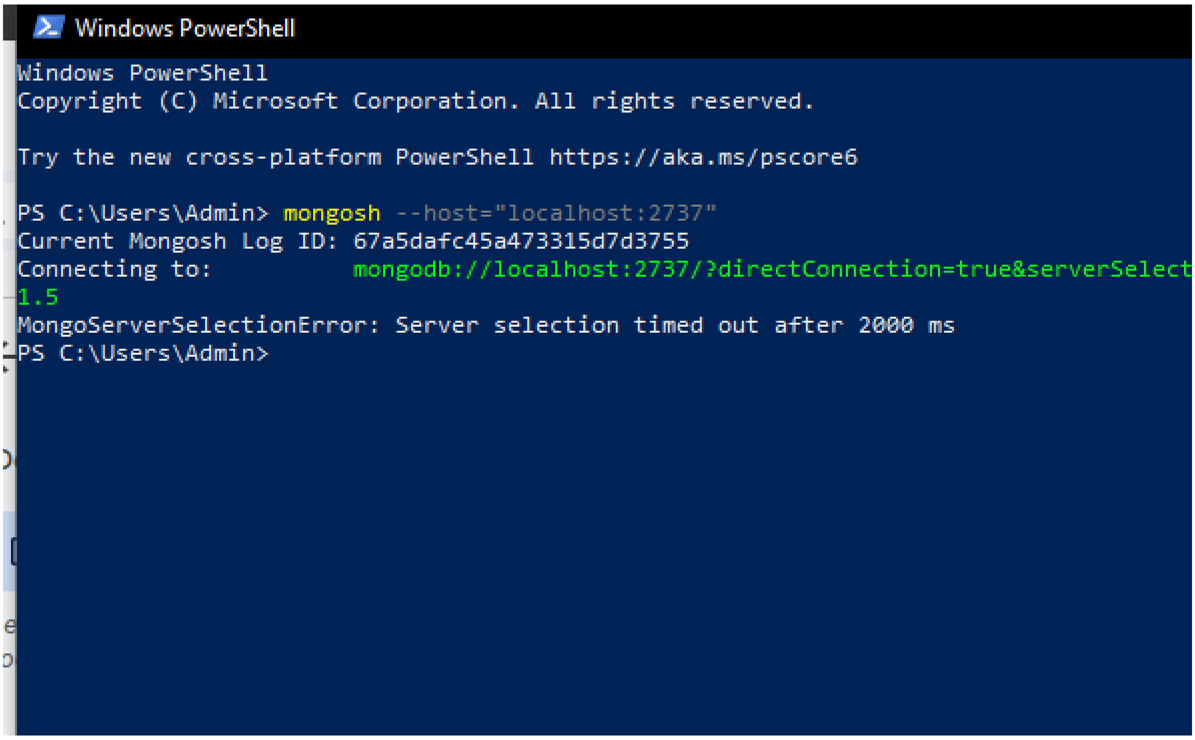



```
PS C:\Users\Admin>
```



```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\Admin> mongosh --host="localhost:2737"
Current Mongosh Log ID: 67a5dafc45a473315d7d3755
Connecting to:          mongodb://localhost:2737/?directConnection=true&serverSelect
1.5
MongoServerSelectionError: Server selection timed out after 2000 ms
PS C:\Users\Admin>
```
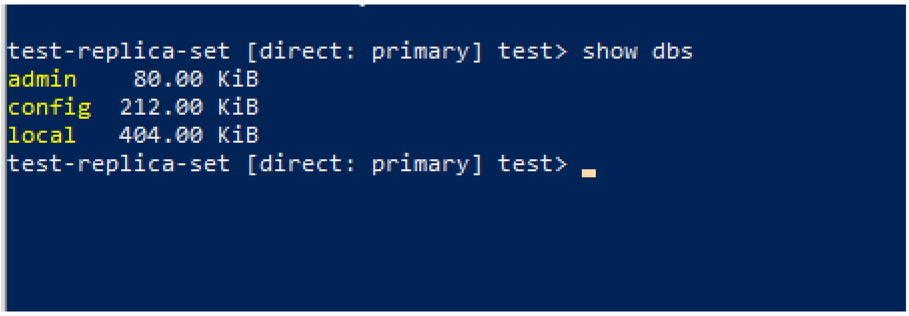
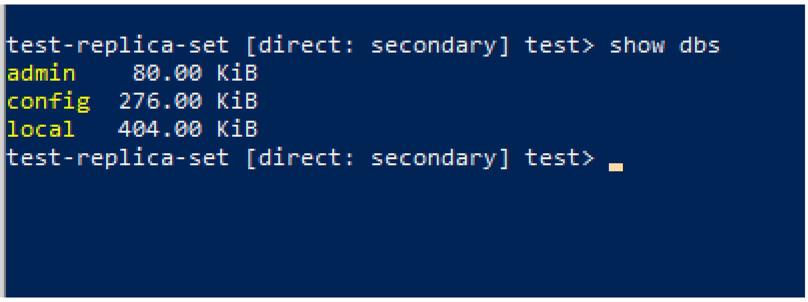
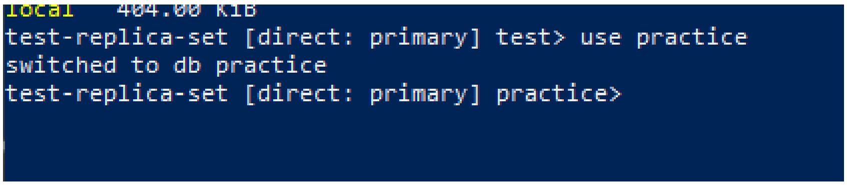



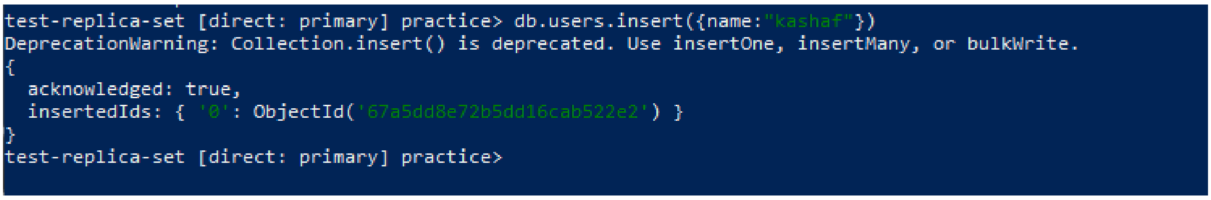
```
test-replica-set [direct: primary] test> show dbs
admin     80.00 KiB
config   212.00 KiB
local    404.00 KiB
test-replica-set [direct: primary] test> 
```



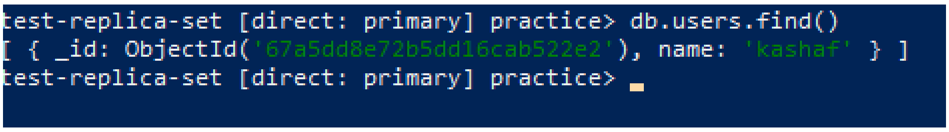
```
test-replica-set [direct: secondary] test> show dbs
admin     80.00 KiB
config   276.00 KiB
local    404.00 KiB
test-replica-set [direct: secondary] test> _
```



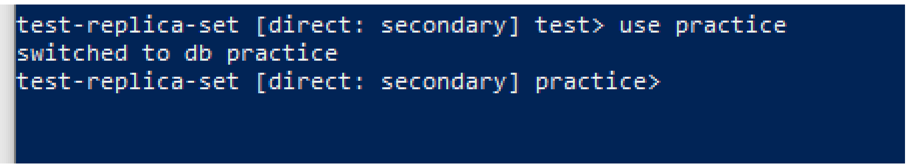
```
local    404.00 KiB
test-replica-set [direct: primary] test> use practice
switched to db practice
test-replica-set [direct: primary] practice>
```



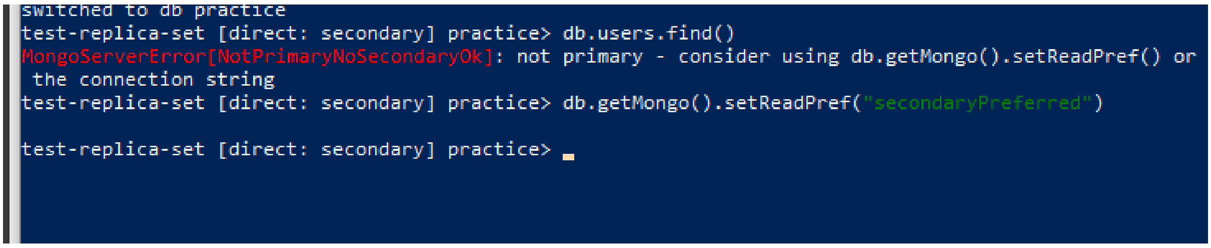
```
test-replica-set [direct: primary] practice> db.users.insert({name:"kashaf"})
DeprecationWarning: Collection.insert() is deprecated. Use insertOne, insertMany, or bulkWrite.
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('67a5dd8e72b5dd16cab522e2') }
}
test-replica-set [direct: primary] practice>
```



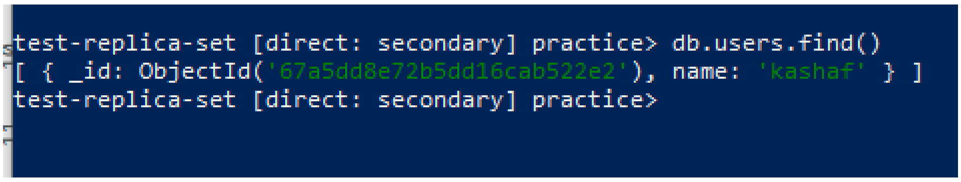
```
test-replica-set [direct: primary] practice> db.users.find()
[ { _id: ObjectId('67a5dd8e72b5dd16cab522e2'), name: 'kashaf' } ]
test-replica-set [direct: primary] practice> _
```



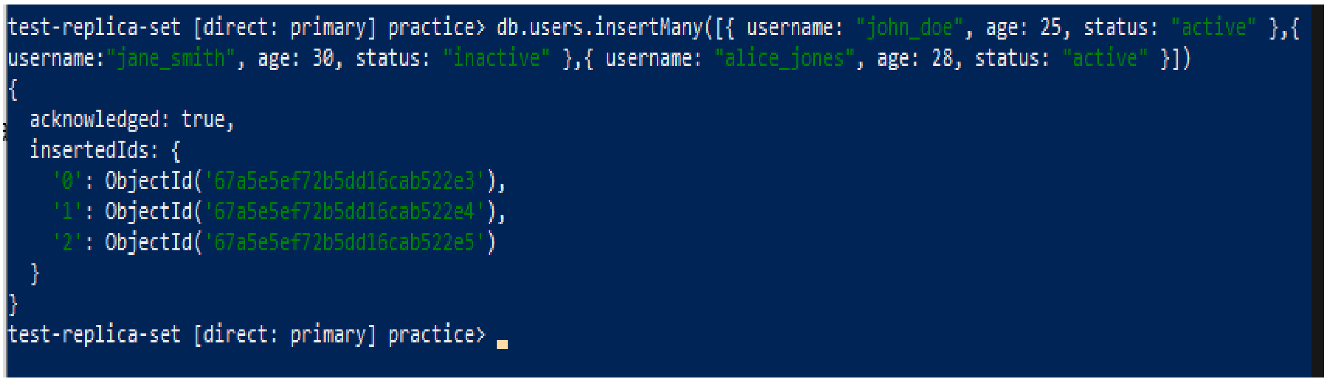
```
test-replica-set [direct: secondary] test> use practice
switched to db practice
test-replica-set [direct: secondary] practice>
```



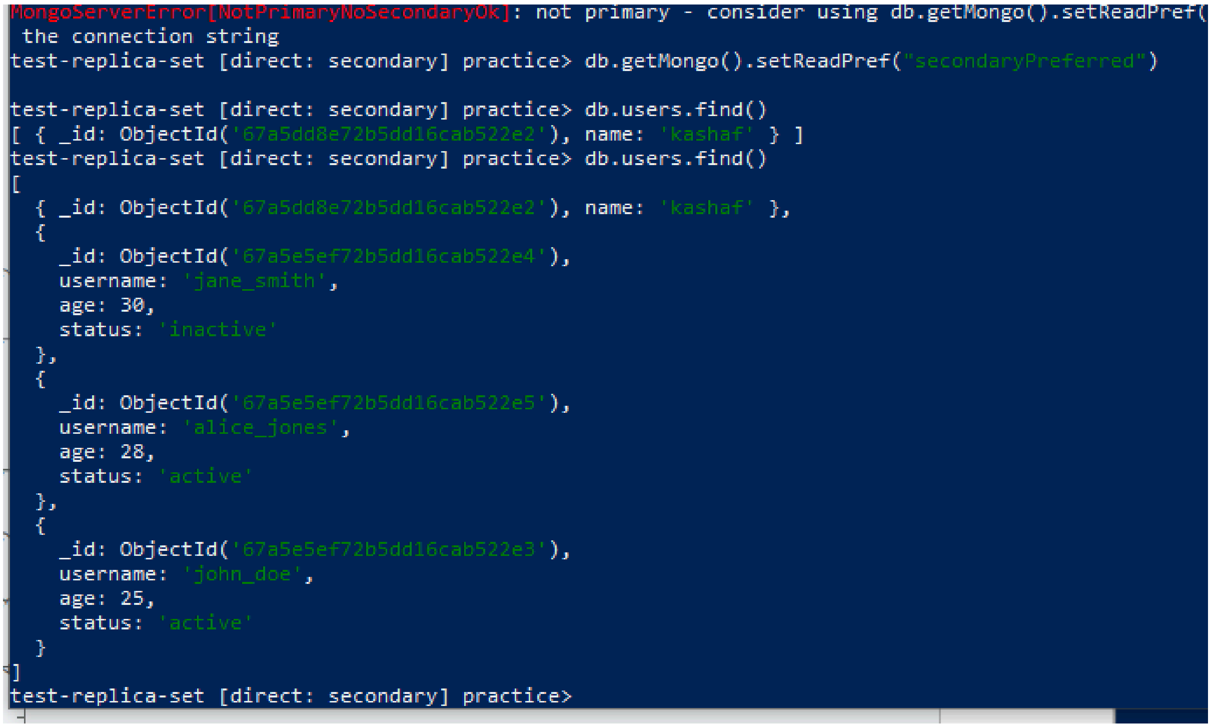
```
switched to db practice
test-replica-set [direct: secondary] practice> db.users.find()
MongoServerError[NotPrimaryNoSecondaryOk]: not primary - consider using db.getMongo().setReadPref() or
 the connection string
test-replica-set [direct: secondary] practice> db.getMongo().setReadPref("secondaryPreferred")

test-replica-set [direct: secondary] practice> _
```



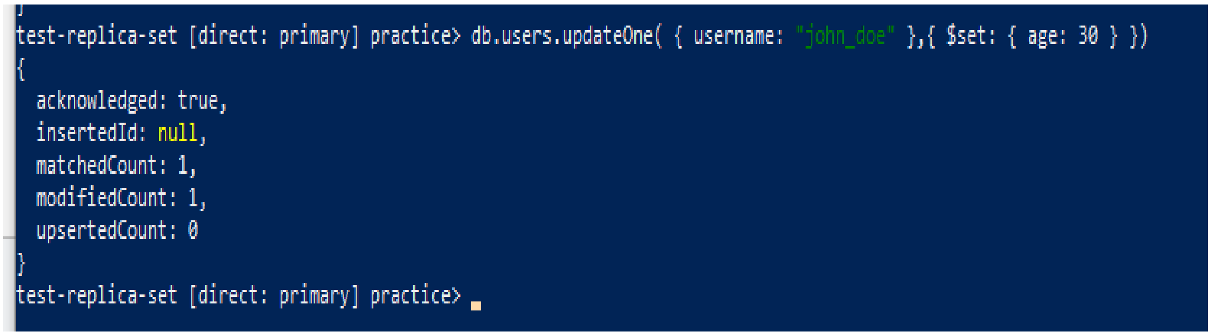
```
test-replica-set [direct: secondary] practice> db.users.find()
[ { _id: ObjectId('67a5dd8e72b5dd16cab522e2'), name: 'kashaf' } ]
test-replica-set [direct: secondary] practice>
```



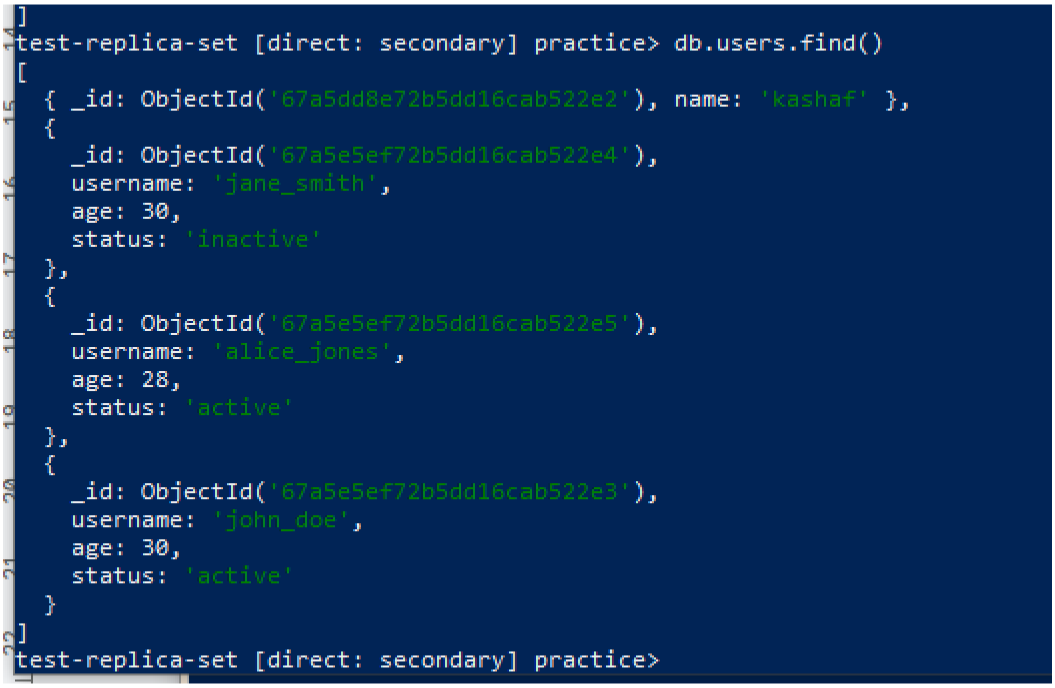
```
test-replica-set [direct: primary] practice> db.users.insertMany([{ username: "john_doe", age: 25, status: "active" },{
username:"jane_smith", age: 30, status: "inactive" },{ username: "alice_jones", age: 28, status: "active" }])
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('67a5e5ef72b5dd16cab522e3'),
    '1': ObjectId('67a5e5ef72b5dd16cab522e4'),
    '2': ObjectId('67a5e5ef72b5dd16cab522e5')
  }
}
test-replica-set [direct: primary] practice>
```



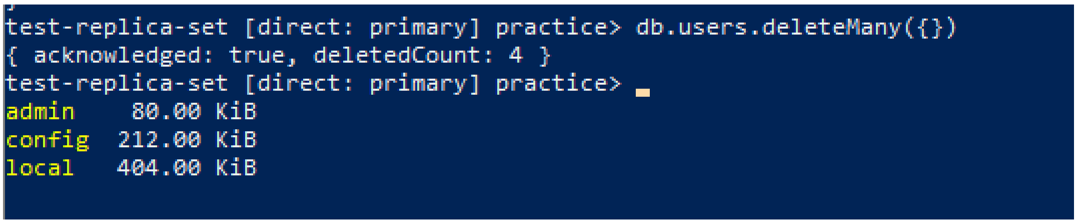
```
MongoServerError[NotPrimaryNoSecondaryOk]: not primary - consider using db.getMongo().setReadPref(
 the connection string
test-replica-set [direct: secondary] practice> db.getMongo().setReadPref("secondaryPreferred")

test-replica-set [direct: secondary] practice> db.users.find()
[ { _id: ObjectId('67a5dd8e72b5dd16cab522e2'), name: 'kashaf' } ]
test-replica-set [direct: secondary] practice> db.users.find()
[
  { _id: ObjectId('67a5dd8e72b5dd16cab522e2'), name: 'kashaf' },
  {
    _id: ObjectId('67a5e5ef72b5dd16cab522e4'),
    username: 'jane_smith',
    age: 30,
    status: 'inactive'
  },
  {
    _id: ObjectId('67a5e5ef72b5dd16cab522e5'),
    username: 'alice_jones',
    age: 28,
    status: 'active'
  },
  {
    _id: ObjectId('67a5e5ef72b5dd16cab522e3'),
    username: 'john_doe',
    age: 25,
    status: 'active'
  }
]
test-replica-set [direct: secondary] practice>
```



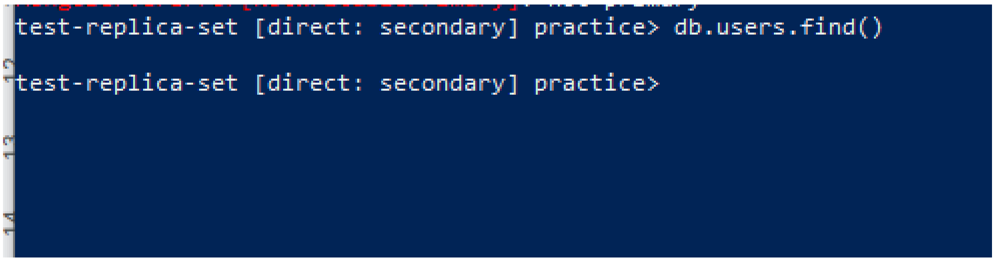
```
]
test-replica-set [direct: primary] practice> db.users.updateOne( { username: "john_doe" },{ $set: { age: 30 } })
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
test-replica-set [direct: primary] practice>
```



```
]
test-replica-set [direct: secondary] practice> db.users.find()
[
  { _id: ObjectId('67a5dd8e72b5dd16cab522e2'), name: 'kashaf' },
  {
    _id: ObjectId('67a5e5ef72b5dd16cab522e4'),
    username: 'jane_smith',
    age: 30,
    status: 'inactive'
  },
  {
    _id: ObjectId('67a5e5ef72b5dd16cab522e5'),
    username: 'alice_jones',
    age: 28,
    status: 'active'
  },
  {
    _id: ObjectId('67a5e5ef72b5dd16cab522e3'),
    username: 'john_doe',
    age: 30,
    status: 'active'
  }
]
test-replica-set [direct: secondary] practice>
```



```
test-replica-set [direct: primary] practice> db.users.deleteMany({})
{ acknowledged: true, deletedCount: 4 }
test-replica-set [direct: primary] practice> 
admin     80.00 KiB
config   212.00 KiB
local    404.00 KiB
```



```
test-replica-set [direct: secondary] practice> db.users.find()

test-replica-set [direct: secondary] practice>
```