something about replication

About me

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The Basics

Basics - What is MongoDB?

1. open source
2. NoSQL database
3. document oriented
4. stores BSON

http://www.mongodb.org

The Basics - What is replication?

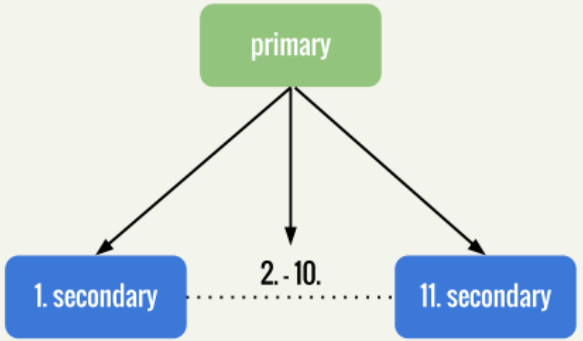
1. provided redundancy
2. increased availability
3. increased read capacity

by syncing data across multiple servers

The Basics - Vocabulary

replication set

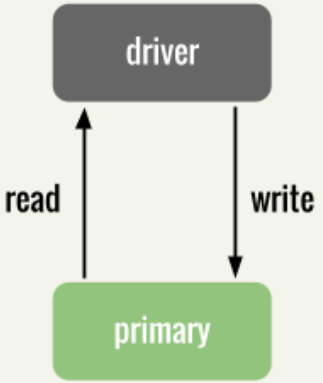
- 1 primary
- 1-11 secondaries



The Basics - Vocabulary

primary

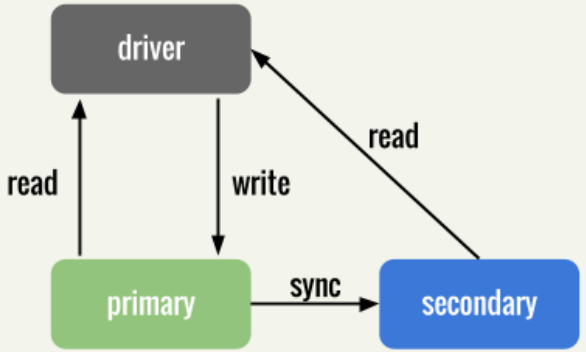
- mongod instance
- read & write
- writes oplog
- majority



The Basics - Vocabulary

secondary

- mongod instance
- read only
- syncs from primary



The Basics - Vocabulary

oplog

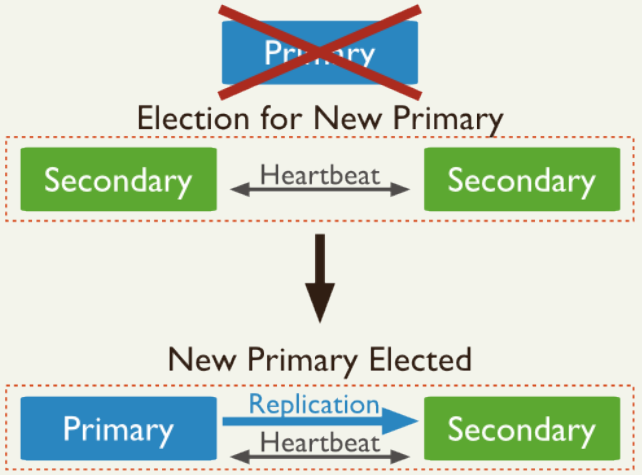
- capped collection
- stores insert & update queries
- extremely fast
- 5% & 1Gb < size <50Gb

The Basics - How does replication work?

1. driver performs write operation
2. primary writes into oplog & db
3. secondaries read oplog
4. secondaries perform oplog queries
5. secondaries write own oplog

The Basics - Automatic Failover

1. no heartbeat
2. election of new primary
3. step up/down



let’s be evil

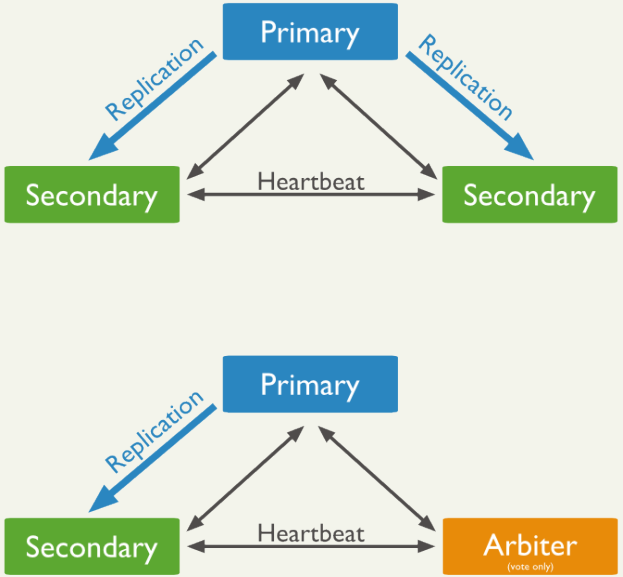
What happened?

1. secondary failed
2. election was held
3. no majority was found
4. primary stepped down

Although a primary was present everything failed!

More or less best practice

1. always odd
   a. add another full secondary
   b. add an arbiter
2. datacenter locations >= 3



So long, and thanks for the fish!