

Miscellaneous



Nuri Halperin

@nurih | www.plusnconsulting.com

Miscellaneous

- 
- Hardware?
 - Cloud?
 - Storage?



- 
- Storage Engines?
 - WiredTiger?
 - Compression?

Hardware

CPU

Memory

Disk

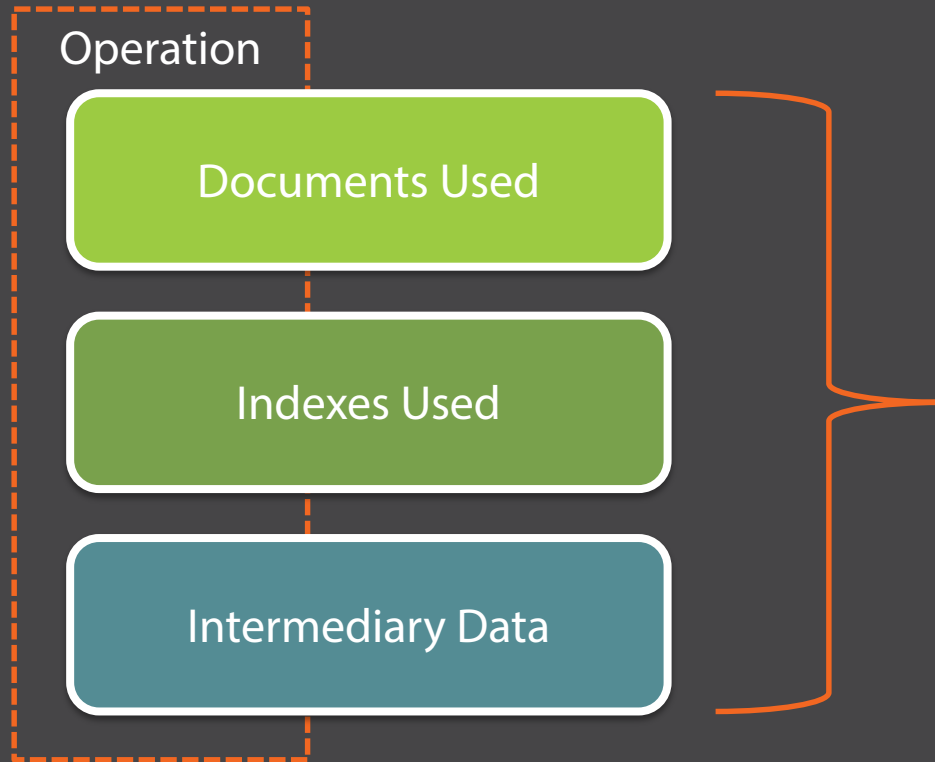
CPU

- Limited effect on overall performance
- Larger effect when storage engine provides
 - Encryption
 - Compression

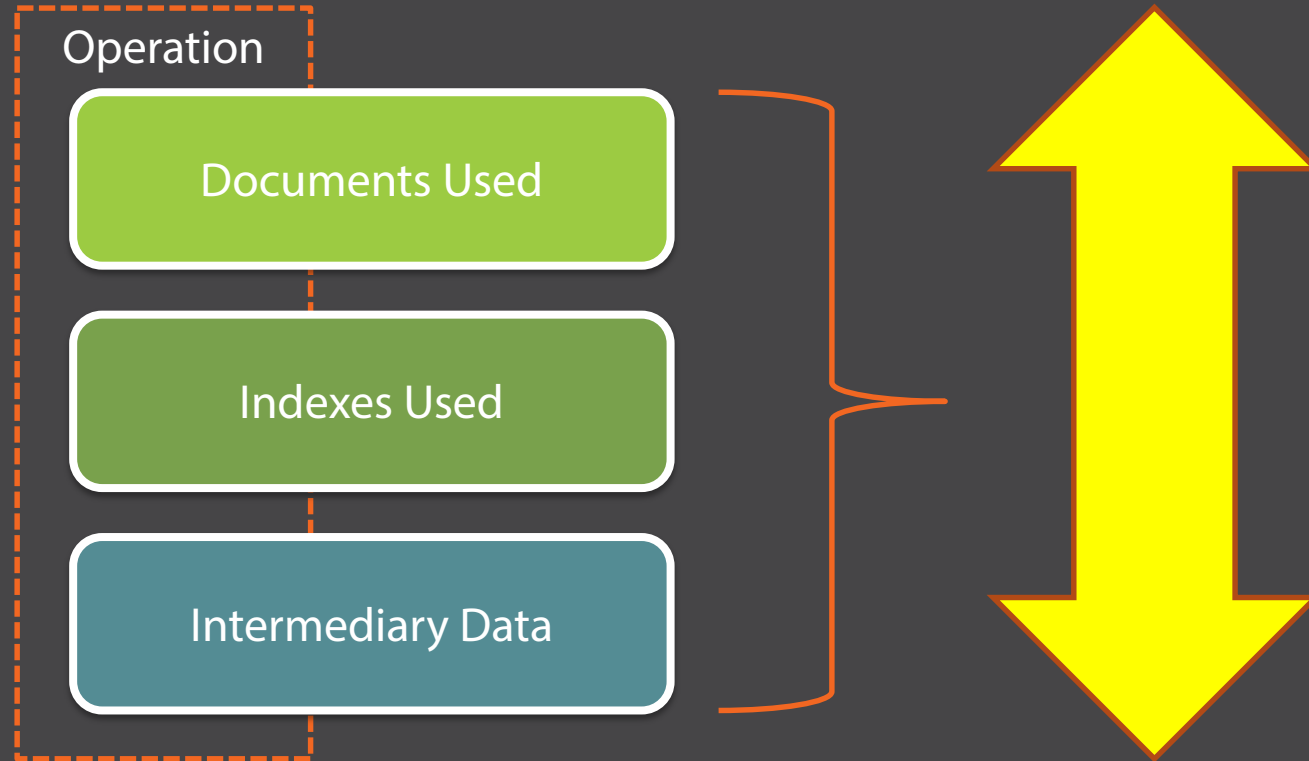
Memory

- Working-set ideally fits in memory
- High page-fault rate when not enough memory

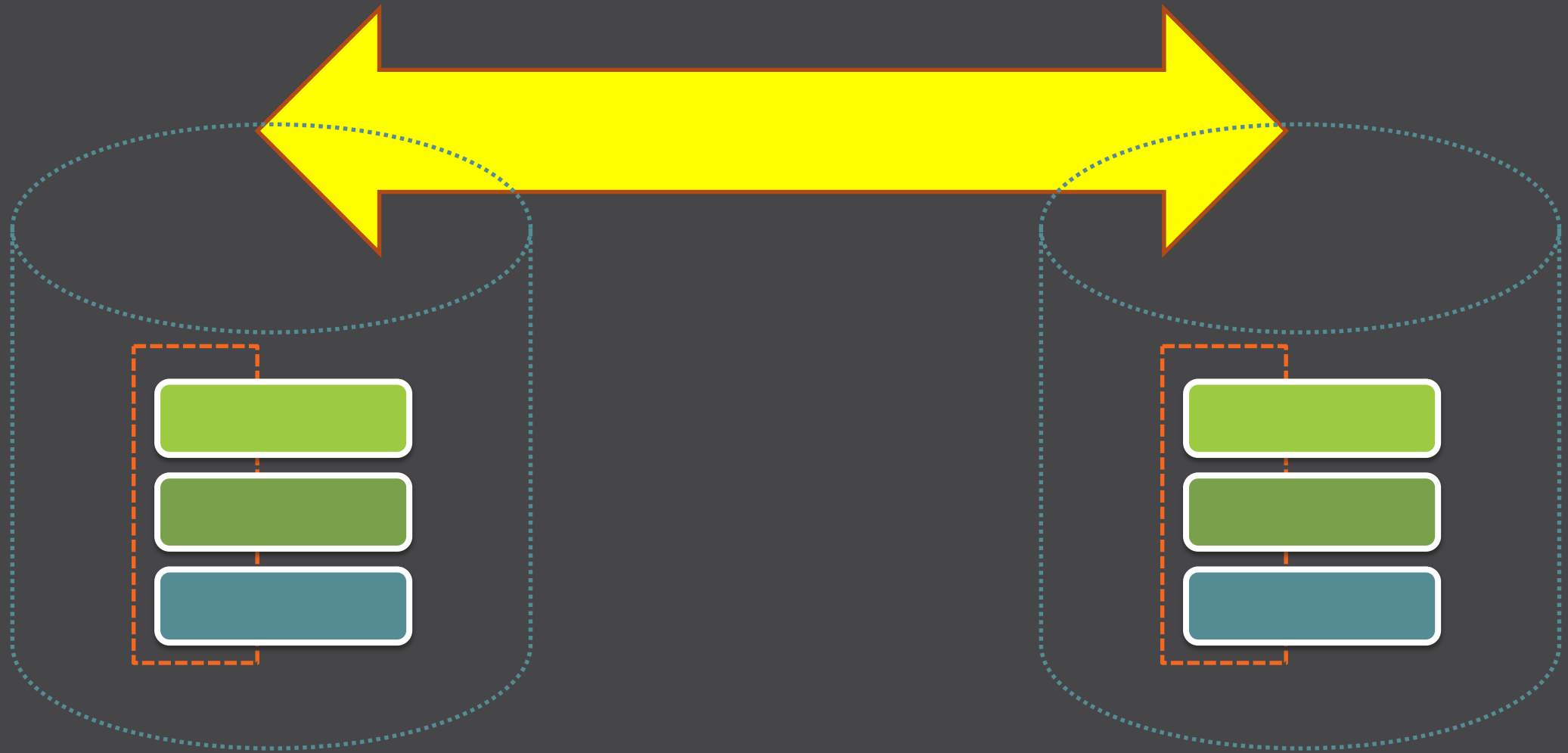
Working Set



Limited RAM



Scale Out!



Disk

- I/O crucial for performance
- SSD provide high random access performance
- RAID not required

Disk

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Spinning Disk
or SSD?

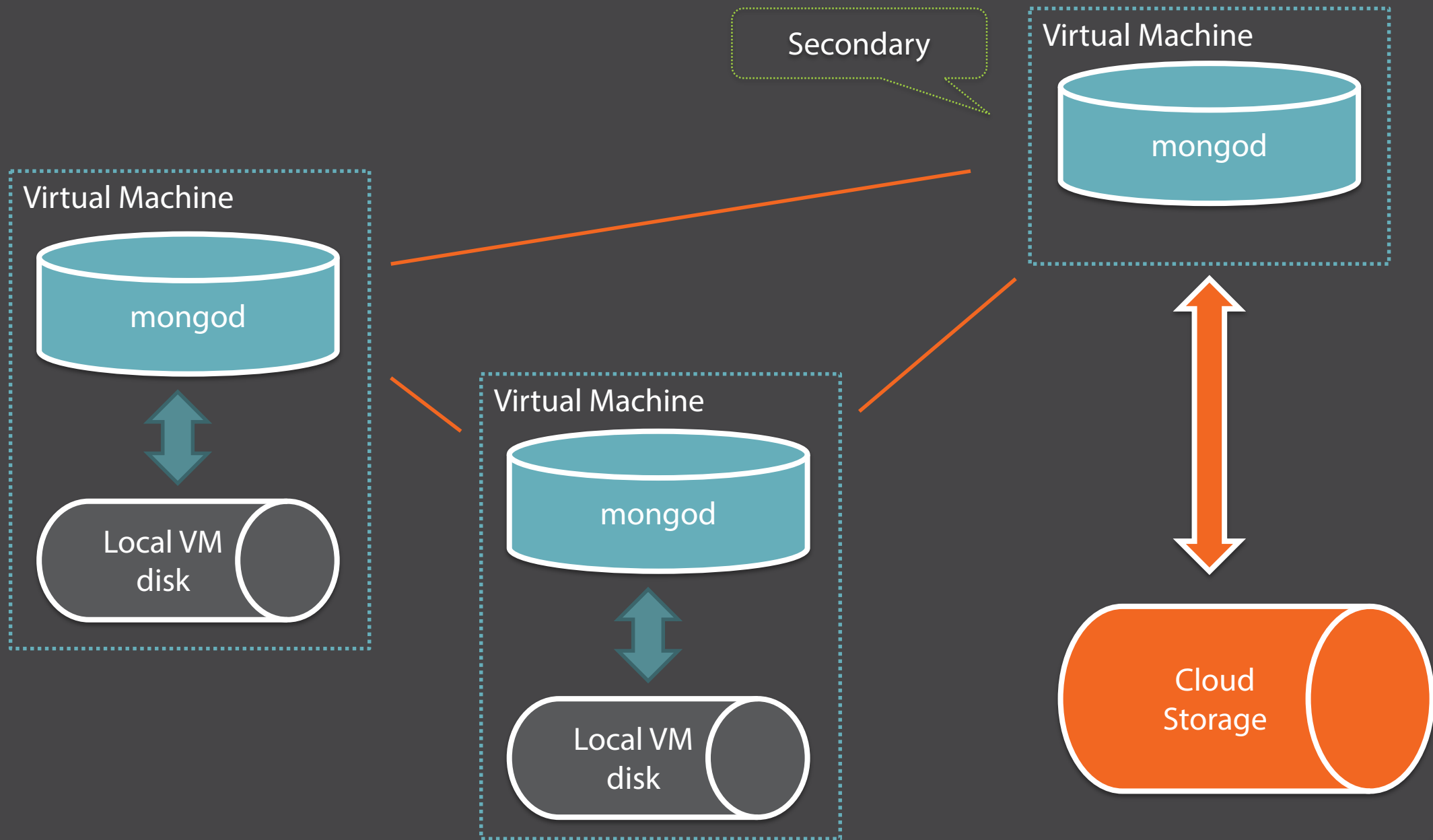
Disk

- I/O crucial for performance
- SSD provide high random access performance
- RAID not required



Cloud

- Watch for variability in performance
- Throughput / latency challenges
- Beware of ephemeral disk issues



Storage Engines

mmapv1

- Speed
- Simplicity

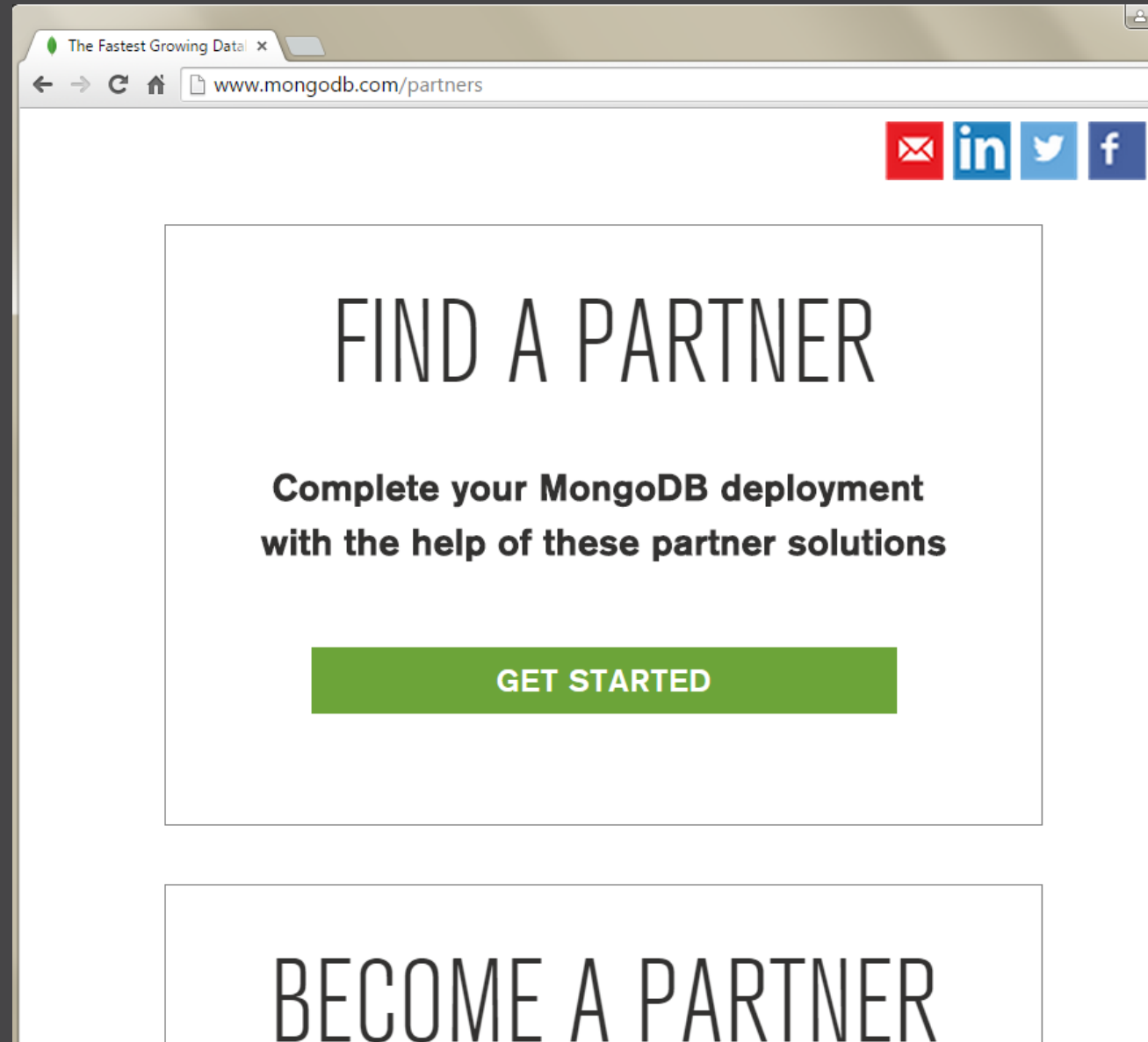
WiredTiger

- Speed
- Compression
- Lock Granularity

3rd party

- Compression?
- Encryption?
- Speed?
- Other?

mongodb.com/partners



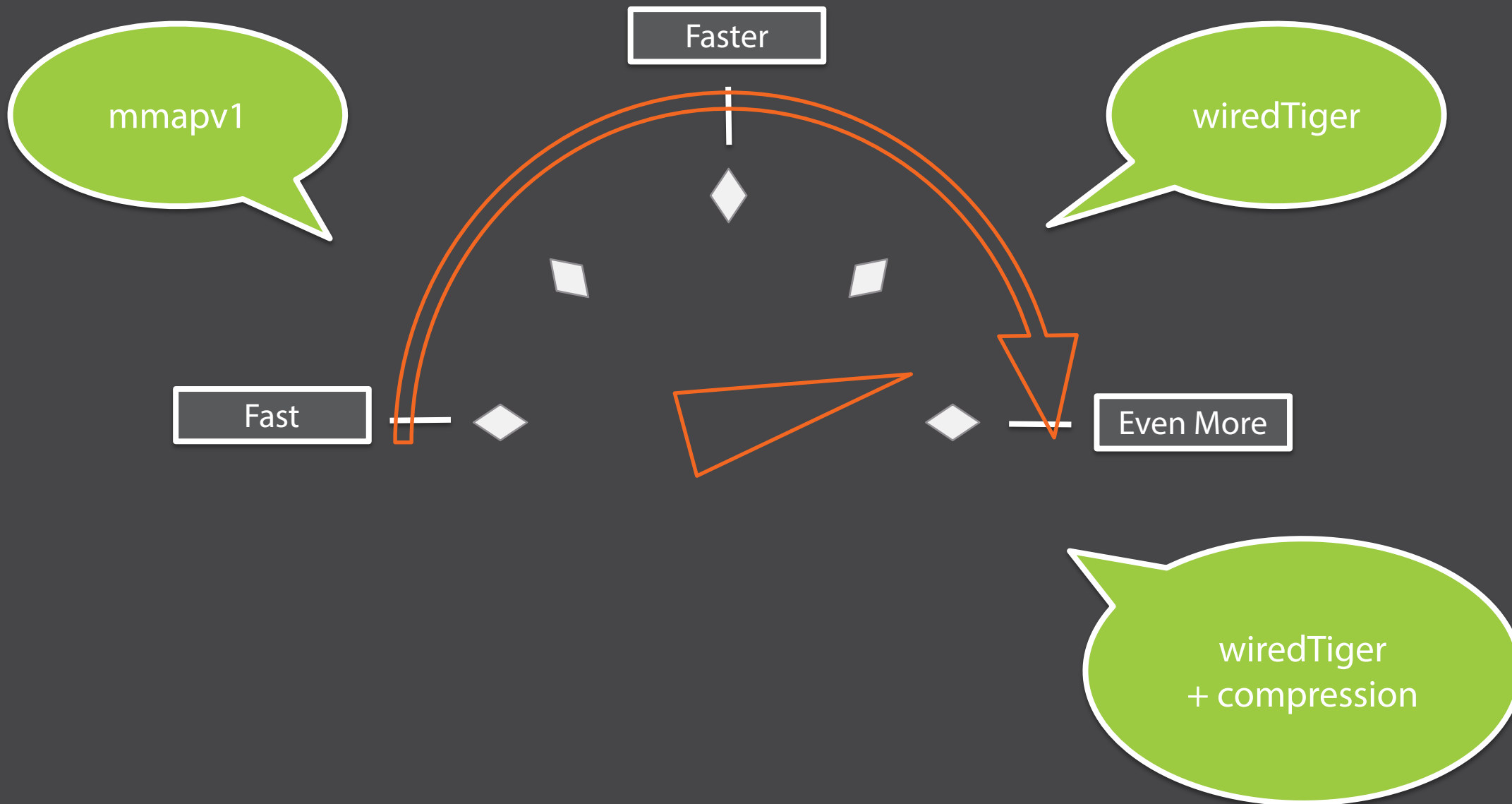
```
mongod --storageEngine wiredTiger
```



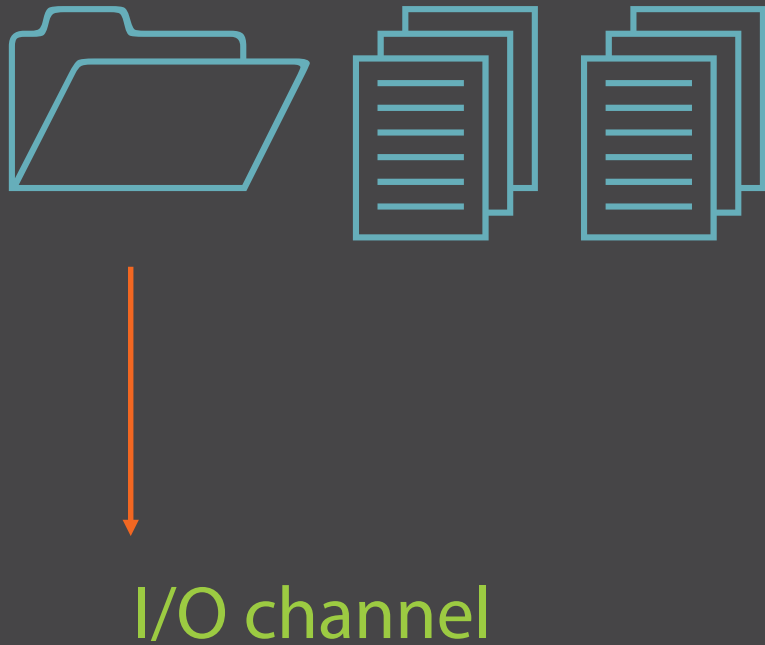
wiredTiger or mmapv1

Wired Tiger Storage Engine

- Document level locking
- Compression
- Speed



Directory for Indexes



Directory for Indexes



I/O channel A



I/O channel B

GOTO -> PROD

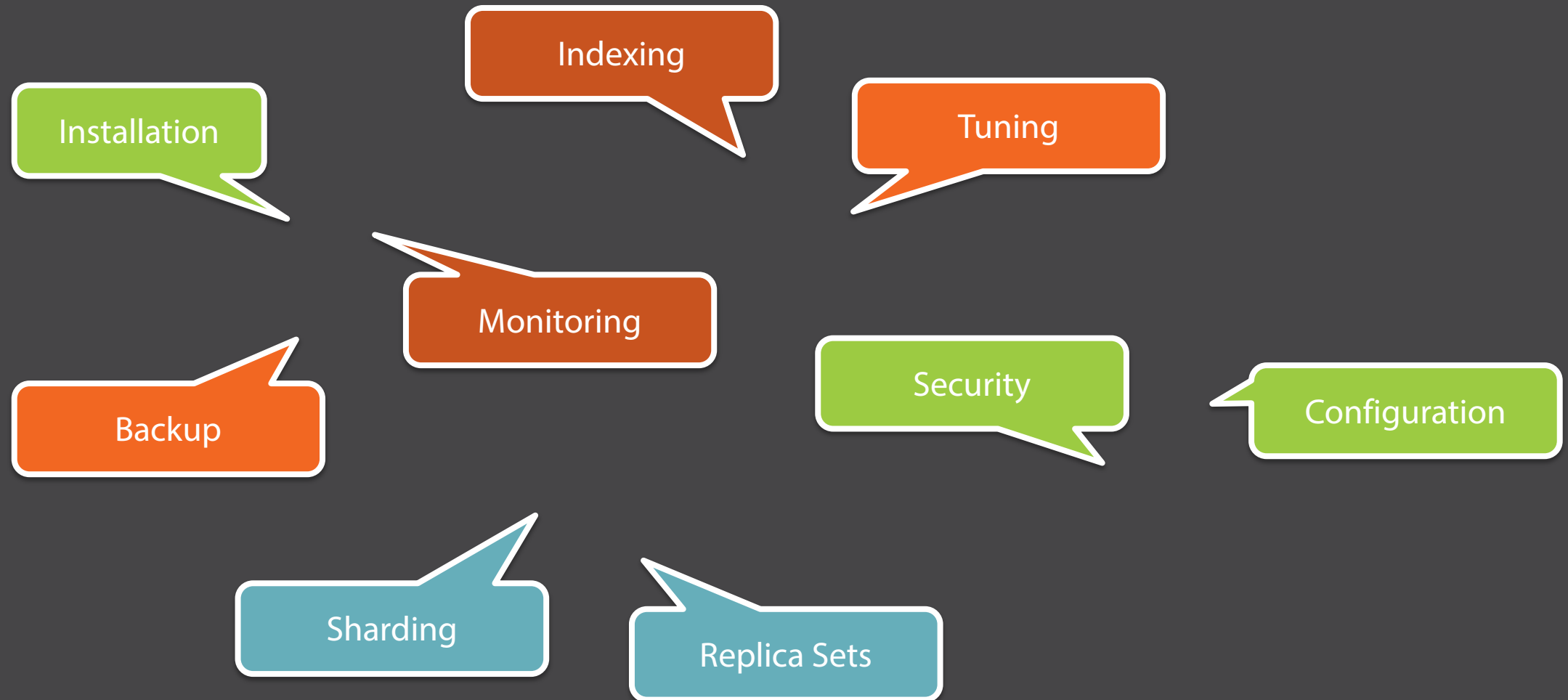

Plan
Use Case
Sizing
Network
Topology
Hardware


Deploy
Setup
Test
Tune


Operate
Monitor
Backup
Spot
Checks


Tune
Query
Plans
Schema
App
Access
Pattern

The More You Know...



Summary

