MongoDB 2.6 is great but what about 2.8?

Norberto

SA | Eng, MongoDB

What's New

- Query System Improvements

- Integrated Text Search

- Enterprise-Grade Security

- Non-Stop Operations

mongoDB

Query System Improvements

Query System Improvments

- Index Intersection

- Pipelined Data Transformations

- New Update Operators

- New Set Operators

Index Intersection

- Simpler ad-hoc queries

- Existing Indexes can be combined to optimize a query

    - Less Index Maintenance
    - Smaller Working Set
    - Lower Write Overhead
    - More Adaptive

mongoDB

Pipelined Data Transformations

- $out for Aggregation

- Write results sets to a named collection

- No limit on output size

- Cursors back for results

mongoDB

New Update Operators

- $mul

- $min

- $max

- $currentDate

- New modifiers for $push

New Set Operators

- $project operator in the aggregation pipeline now supports an expanded set of expressions
  - $setIsSubset
  - $setEquals
  - $setDifference
  - $setIntersection
  - $setUnion
  - $allElementsTrue
  - $anyElementTrue

mongoDB

Redaction

- Field-level Security

- Access policies can be set in Query Language

- Two criteria to set Permissions
  - Document Content
  - User Privilege

mongoDB

# Integrated Search

mongoDB

Text Search

- Now production-ready

- Integrated with MongoDB's Query Engine

- Multi-language document support

- Text-search expressions can be used in the Aggregation Framework (not true in 2.5.4)

mongoDB

Possibilities with Text Search

- Relevance ranking

- Boolean operators

- Language-specific tokenization and stemming

- Fielded search

- Field-weighted scoring

- Stop words

- Type-aware indexes

Security
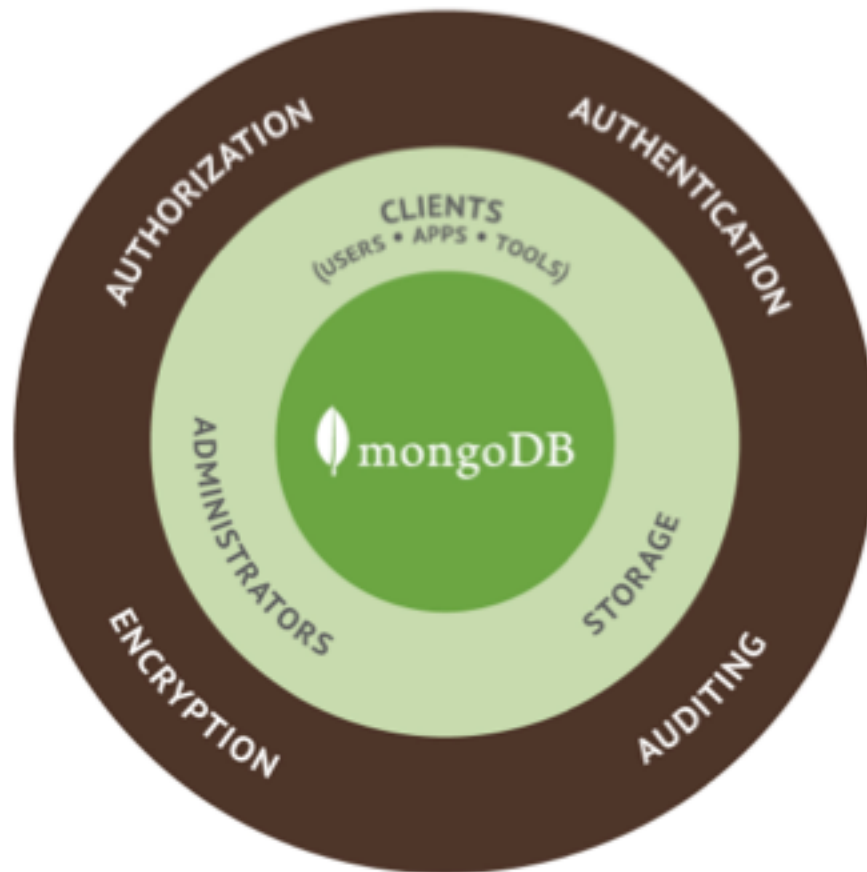
MongoDB Enterprise-Grade Security

Business Needs	Replica Set Benefits
Authentication	In Database LDAP* Kerberos* x.509 Certificates*
Authorization	Built-in Roles User-Defined Roles Field Level Security
Auditing	Admin Operations* Queries (via Partner Solutions)
Encryption	Network: SSL (with FIPS 140-2)* Disk: Partner Solutions

*Requires MongoDB Enterprise

Security

- Authentication with LDAP (Enterprise only)

- x.509 Certificates

- User defined roles

- Auditing (Enterprise only)

- Windows Kerberos Support (And Windows Enterprise)

mongoDB

State of Security in MongoDB

- Authentication
    - Who are you?
    - X.509 authentication and Kerberos

- Authorization
    - What can you do?
    - User Defined Roles, Collection-level Access Control

- Auditing
    - What have you done?
    - DDL, User Manipulation, Authorization failure

mongoDB

Operational Improvements

Improving Performance and Scalability

- Query Router Connection Pooling

- Bulk Write Operations

- Resource Overload Protection with $maxTimeMS

Operational Improvements

- Background Secondary Indexing

- Mixed SSL Connections

- Expanded SNMP Support

mongoDB

So … what's coming?!

mongoDB

Document Level Locking!!!

mongoDB

Pluggable Storage Engine API

mongoDB

MMS Monitoring API

MMS Backup API

MMS Automation GA

mongoDB

Obrigado!

Norberto Leite

mongoDB