

MongoDB Advance

Data representation

- Document in detail
- Collection in detail
- Mongo: databases, collections, documents

CRUD

- Introduction
- Insert: method definition
- Insert: inserting a single document
- Insert: inserting many documents
- Insert: document restrictions
- Find: methods definition
- Find: cursor
- Find: basic operators
- Find: logical operators
- Find: document structure conditions
- Find: embedded documents
- Find: \$where
- Find: arrays
- Find: projection
- Find: projection operators
- Find: sorting
- Find: sorting unstructured data
- Find: limit results
- Update: method definition
- Update: replacing the whole document
- Update: modification of selected fields
- Update: arithmetic modifications
- Update: array - add new elements
- Update: array - remove elements
- Update: array - specific elements
- Update: upsert
- Update: multiple documents
- Remove: method definition
- Remove: deleting in action

- Bulk operations

Indexes

- Introduction
- Create, list and delete indexes
- Single field index (+explain +hint)
- Single field index: sorting
- Index characteristics
- Compound index
- Compound index: sorting
- Unique and sparse indexes
- Multikey indexes
- Covered query
- Special indexes

Special MongoDB features

- Full text search
- Full text search: case sensitivity and diacritic characters
- Full text search: compound index
- Full text search: score and sorting
- Full text search: restrictions and performance

Geospatial support

- Geospatial support: 2d
- Geospatial support: 2dsphere

Collections

- Introduction
- Create collection manually and primary index
- Capped collections
- TTL collections
- Document validation: introduction
- Document validation: validator
- Document validation: validation level
- Document validation: validation action

Aggregation framework

- Introduction
- \$match
- \$project

- \$redact
- \$group
- \$sample
- \$sort, \$limit and \$skip
- \$geoNear
- \$unwind
- \$out
- \$lookup
- \$indexStats
- Single action aggregation operations
- Expressions

Schema design

- Introduction
- Document embedding
- Linking documents
- One-to-one
- One-to-many
- Many-to-many
- Designing sample relationships
- Two phase commit: success
- Two phase commit: rollback
- DBRefs

Replica set

- Introduction
- Setting up a replica set
- Primary and secondaries (elections)
- Writing and reading data
- Replication
- Types of members
- Current state of a replica set
- Automatic failover
- Your application: working with a replica set
- Designing a replica set

Sharding

- Introduction
- Setting up a sharded cluster
- Primary shard
- Sharding collections
- Sorted shard key
- Hashed shard key

- Shard keys and queries

GridFS

- Introduction
- Component and connection
- Data representation
- Commands

Miscellaneous topics

- Storage engines
- Write concern
- Authentication