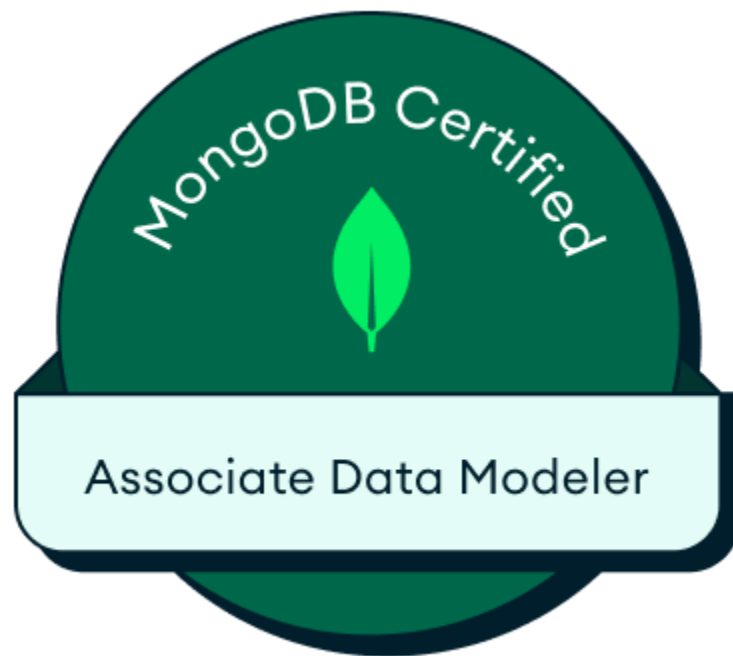


# MongoDB Associate Data Modeler Exam Guide



## Introduction

Congratulations for taking the first step in becoming MongoDB certified! This exam guide is designed to familiarize you with the details of the exam, the topics covered, and the resources to help you prepare. When you pass this exam, you will attain the MongoDB Associate Data Modeler credential.

## Exam purpose

The MongoDB Associate Data Modeler certification is intended to assess and validate a candidate's knowledge and skills needed to show competency in data modeling on MongoDB. With this certification, individuals should be able to:

- Design, build, and evolve effective data models on MongoDB
- Incorporate data governance into their work

## Candidate Description

This certification is designed for people with existing foundational knowledge of data management and modeling on MongoDB. Candidates should have some experience with:

- JSON and the MongoDB Query Language, including aggregations
- Data modeling on MongoDB
- Understand tradeoffs of simplicity versus performance of data modeling techniques

The MongoDB Associate Data Modeler certification is not designed for beginners.

## Exam Details

**Number of questions:** 70 questions (60 scored questions/10 unscored questions)

- Unscored questions do not affect your score as MongoDB analyzes statistical performance data on unscored questions before determining their use as a scored item on a future exam. Your final score is only based on your responses to the 60 scored questions.

**Question type:** Multiple Choice and Multiple Response

- **Multiple Choice:** Has one correct response
- **Multiple Response:** Has two or three correct responses
  - A prompt for choosing multiple responses will exist in the exam question

**Time allotted:** 105 minutes

**Exam fee:** USD \$150

**Delivery Options:** Online in a proctored environment

**Prerequisites:** None

**Language:** English

**Other important information:**

- Reference materials are not allowed during testing
- The unscored questions on the exam will not impact your exam score.
- If you have a disability and/or English is not your first language, we offer extended time versions of all of our exams upon request. Once you schedule your exam, please request extended time by sending your request to [certification@mongodb.com](mailto:certification@mongodb.com) **We require 72 hrs of advanced notice for extended time requests so we can make sure the proper arrangements are made.**
- Although you are provided with an immediate pass/fail result upon completion of the exam, our proctoring vendor, Examity, requires 72 hours to conduct a review of your testing session before your digital badge is released from Credly.

## Scoring

MongoDB Certification exams have a pass/fail grading system that is determined through statistical analysis performed by psychometricians. Candidates must meet a required percentage to pass an exam. MongoDB does not publish the required percentages for our certifications as each exam passing score is determined by unique exam-specific statistical data. Candidates only need to obtain an overall required percentage to pass an exam and do not need to obtain a passing percentage for each specific domain.

Each domain has a specific weighting on the exam, which is shared in percentages within each Exam Study Guide. Domain weightings are determined by a panel of Subject Matter Experts who contributed to the development of the certification. Some domains can have more or less exam questions than others depending on the analysis of knowledge and skills required to show competency during the Job Task Analysis for the certification.

Upon completion of an exam, candidates will receive a score report that states whether they passed or failed the exam, in addition to the total percentage correct for each domain. The purpose of the score report is to provide candidates with data behind their strengths and where improvements can be made in their performance.

Candidates will receive one point for each scored exam question that is answered correctly. Periodically there are extra exam questions called unscored exam questions that do not impact your score. MongoDB field tests potential new exam questions and

analyzes their statistical performance before determining if they should be used as scored exam questions on a future exam. The unscored items are not identified to avoid bias.

## Recommended Training and Resources

This guide is meant to provide an overview of the exam and should not be the only means of preparation. While MongoDB training is not a prerequisite for this exam, and training alone does not guarantee certification, we strongly recommend candidates leverage the following MongoDB training courses and resources to prepare:

### Free On-Demand Course

- Complete the course [Data Modeling for MongoDB](#)
- Read about [Data Modeling in MongoDB](#)

### Additional Training Resources

- [Associate Data Modeler Practice Questions](#)
- [MongoDB Documentation](#)
- [MongoDB Community Forums](#)
- [MongoDB LinkedIn Group](#)
- [Data Modeling - Map Schema Relationships](#)
- [Data Modeling - Schema Validation](#)
- [Data Modeling - Handling Duplicate Data](#)
- [Indexes - creating, managing, and strategies](#)

## Exam Study Guide

This study guide includes the domains and objectives that are assessed on the exam. Exam questions are written at the objective level. The sub-bullets under the objectives offer additional context for preparation.

### Domains and Objectives

The exam includes the following domains with the associated percent of exam questions for each domain:

Domain	Percent of Exam Questions
1. Requirements Gathering	10%
2. Entities	13%
3. Relationships	8.5%

4. Workload/Usage	10%
5. Data Model Design	28%
6. Modeling for Technical Requirements	10%
7. Indexing	13%
8. Monitoring and Evolving Data Models	7.5%

### **Domain 1: Requirements Gathering (10%)**

Objective 1.1: Identify application operations that require documents designed for performance.

- Understand application operations
- Understand performance requirements for an application
- Understand which application operations are high priority for optimizing performance

Objective 1.2: Identify what information is required as a prerequisite for data modeling.

- Understand how to identify the data sources needed

### **Domain 2: Entities (13%)**

Objective 2.1: Identify all persisted data entities from the application.

- Understand what data needs to persist in the application
- Understand what data types exist in the application

Objective 2.2: Group entities into a domain for which they belong.

Objective 2.3: Identify domain ownership and if there is any possibility of data duplication and data syncing required.

- Identify collections and fields where data syncing/duplication may be required
- Identify domain owners for each entity

### **Domain 3: Relationships (8.5%)**

Objective 3.1: Identify the relationships among persisted entities and the cardinality of each relationship.

- Understanding edge cases of skew

Objective 3.2: Identify strong and weak entities based on application object analysis.

- Understanding the difference between strong and weak entities
- Understand primary key versus partial discriminator key

#### **Domain 4: Workload/Usage (10%)**

Objective 4.1: Identify the entities required by each application operation.

- Understand CRUD application operations
- Understand entities involved per operation

Objective 4.2: Identify impactful application operations that persist data or retrieve persisted data.

- Understand which CRUD application operations are most impactful to the application
- Understand which impactful app operations persist/retrieve data

Objective 4.3: Identify requirements for active data and historical data.

- Understand retention requirements
- Understand retrieval times needed based on SLAs as it pertains to historical data

#### **Domain 5: Data Model Design (28%)**

Objective 5.1: Define usage patterns based on requirements.

- Understand and gather all interactions that will be made against the entities for a particular application
- Understand when to use schema design patterns such as computed, versioning, subset
- Understanding scalability, efficiency, security
- Understand when to use embedding versus referencing

Objective 5.2: Determine usage patterns for impactful queries related to frequency and importance.

- Rank most important or most frequent queries to determine usage patterns
- Quantify when to use schema design patterns such as computed, versioning, subset when there are latency requirements

Objective 5.3: Determine the optimal patterns based on relationships/entities to build a model with documented tradeoffs.

- Understand positives/negatives of the different schema design patterns such as computed, versioning, subset
- Understand positives/negatives of embedding versus referencing

Objective 5.4: Design schema using schema design patterns based on embedding, referencing, and expected workloads.

- Decide on the format of capturing the schema (JSON schema, etc.)

Objective 5.5: Implement MongoDB patterns needed to meet business requirements.

- Understand how to iterate on the versions of the schema
- Understand positives/negatives of in-app enforcement versus schema validation
- Decide which fields to govern with schema validation

## **Domain 6: Modeling for Technical Requirements (10%)**

Objective 6.1: Identify performance requirements within the context of data modeling based on technical requirements.

- Understand performance requirements as they relate to data creation, modification speed, frequency needs, data retrieval, etc.
- Determine data retention based off performance requirements

Objective 6.2: Define a schema using schema validation.

- Understand limitations
- Understand the implications of adding another piece into an array
- Evaluate the existing schema and the tradeoffs of leaving out features for future iterations

## **Domain 7: Indexing (13%)**

Objective 7.1: Determine indexing and data storage strategies based on analysis of query and analytics patterns.

- Ensure whether a query is part of a transaction or not
- Ensure appropriate key fields are indexed
- Decide appropriate data storage type such as traditional database index, search index, vector, materialized views, pre-aggregation, etc.

Objective 7.2: Implement index strategy based on common queries.

- Understand various index kinds such as wildcard index, TTL index, etc.
- Understand specific index operation behaviors, such as collation, case insensitivity, etc.
- Understand how to use the Equality, Sort, Range (ESR) method

Objective 7.3: Analyze performance of indexes and storage strategies to determine optimal approach for common and uncommon queries.

- Measure performance of common and uncommon queries
- Understand how to analyze an explain plan

## **Domain 8: Monitoring and Evolving Data Models (7.5%)**

Objective 8.1: Monitor an implemented model to determine when to revisit and iterate.

- Track business requirement or technical changes that might require iteration of the data model
- Identify potential reasons to revisit the data model

Objective 8.2: Determine schema modifications to support business goals as applications evolve and requirements change.

- Understand whether change in requirements requires a full rewrite or iteration on the schema
- Implement schema changes based off business or technical requirements

## Support

### MongoDB Program Support

You can learn more about the testing experience and our program guidelines in the [MongoDB Certification Program Guide](#). If you need to reach the MongoDB certification team, send us a ticket and we'll get back to you ASAP! Submit a [support ticket](#).

### Examity Online Proctor Support

If you're having trouble scheduling an exam or connecting with your proctor, or if you get disconnected during your exam, please contact our testing provider using one of these methods:

#### [Webform](#)

#### [Email](#)

#### Phone:

U.S.: +1 855-392-6489

England: +44 800 086 8080

Ireland: +353 1800 832 210

Australia: +61 2 8520 3169

India: +91 000 80091 91077

### Credly Badging Support

If you're looking for help with a badge you've earned, please visit the [Credly Help Center](#).