Report

MongoDB is a document database designed for ease of development and scaling. The Manual introduces key concepts in MongoDB, presents the query language, and provides operational and administrative considerations and procedures as well as a comprehensive reference section. MongoDB is an open-source document database and leading NoSQL database. MongoDB is written in C++. MongoDB concepts are needed to create and deploy a highly scalable and performance-oriented database. MongoDB offers both local and cloud-hosted deployment options.

Key-Features:
1) High-Performance: MongoDB provides high-performance data persistence. In particular,
a)Support for embedded data models reduces I/O activity on the database systems, b)Indexes support faster queries and can include keys from embedded documents and arrays.

2) Rich Query Language: MongoDB supports a rich query language to support read and write operations (CRUD) as well as: a)Data Aggregation, b)Text Search and Geospatial Queries.

3) High-Availability: MongoDB's replication facility, called replica set, provides: a)Automatic Failure, b)Data Redundancy. A replica set is a group of MongoDB servers that maintain the same data set, providing redundancy and increasing data availability.

4) Horizontal Scalability: MongoDB provides horizontal scalability as part of its *core* functionality: a) Sharing distributes data across a cluster of machines,
b) MongoDB supports creating zones of data based on the shard key.

Applications: MongoDB is widely used across various web applications as the primary data store. One of the most popular web development stacks, the MEAN stack employs MongoDB as the data store (MEAN stands for MongoDB, ExpressJS, AngularJS, and NodeJS)

Advantages:
1) Clustering: MongoDB allows sharing of data across the nodes in a cluster so as to ensure that there is no single-point-of-failure in the database server.
2)Support for Secondary Indices: MongoDB allows for not just a primary index but also for a secondary index which is important in many applications.

Disadvantages: MongoDB is a NoSQL database and as a result, it is not ACID compliant (Atomicity, Consistency, Isolation, Durability). As a result, in the applications where ACID compliance (for example, applications that require database-level transactions) is required, MongoDB cannot be used. For instance, one might not want to use MongoDB when designing a core-banking system for a bank.