Read Operations

When a replica set has one and only one primary, reads from that primary provide *strict consistency*. [1]

By default, clients read from the primary; however, clients can specify a *read preference* (page 588) to send read operations to secondaries. *Asynchronous replication* (page 561) to secondaries means that reads from secondaries may return data that does not reflect the state of the data on the primary. For information on reading from replica sets, see *Read Preference* (page 588).

In MongoDB, clients can see the results of writes before they are made durable:

- Regardless of *write concern* (page 130), other clients can see the result of the write operations before the write operation is acknowledged to the issuing client.
- Clients can read data which may be subsequently *rolled back* (page 584).

Additional Features

Replica sets provide a number of options to support application needs. For example, you may deploy a replica set with *members in multiple data centers* (page 579), or control the outcome of elections by adjusting the `priority` of some members. Replica sets also support dedicated members for reporting, disaster recovery, or backup functions.

See *Priority 0 Replica Set Members* (page 567), *Hidden Replica Set Members* (page 569) and *Delayed Replica Set Members* (page 570) for more information.

9.1.3 Additional Resources

- Quick Reference Cards[2]
- Webinar: Managing Your Mission Critical App - Ensuring Zero Downtime[3]

9.2 Replication Concepts

These documents describe and provide examples of replica set operation, configuration, and behavior. For an overview of replication, see *Replication Introduction* (page 559). For documentation of the administration of replica sets, see *Replica Set Tutorials* (page 602). The *Replication Reference* (page 651) documents commands and operations specific to replica sets.

Replica Set Members **(page 564)** Introduces the components of replica sets.

> ***Replica Set Primary*** **(page 564)** The primary is the only member of a replica set that accepts write operations.
>
> ***Replica Set Secondary Members*** **(page 567)** Secondary members replicate the primary's data set and accept read operations. If the set has no primary, a secondary can become primary.
>
> ***Priority 0 Replica Set Members*** **(page 567)** Priority 0 members are secondaries that cannot become the primary.
>
> ***Hidden Replica Set Members*** **(page 569)** Hidden members are secondaries that are invisible to applications. These members support dedicated workloads, such as reporting or backup.
>
> ***Replica Set Arbiter*** **(page 571)** An arbiter does not maintain a copy of the data set but participate in elections.

Replica Set Deployment Architectures **(page 572)** Introduces architectural considerations related to replica sets deployment planning.

[2] https://www.mongodb.com/lp/misc/quick-reference-cards?jmp=docs
[3] http://www.mongodb.com/webinar/managing-mission-critical-app-downtime?jmp=docs