Chapter 2: Replication

Read Concerns

Back to the Question

None of the read concerns *require* you to specify a write concern. However, reads with the read concern `majority` and `linearizable` will only return data that has been replicated to a majority of nodes in the replica set.

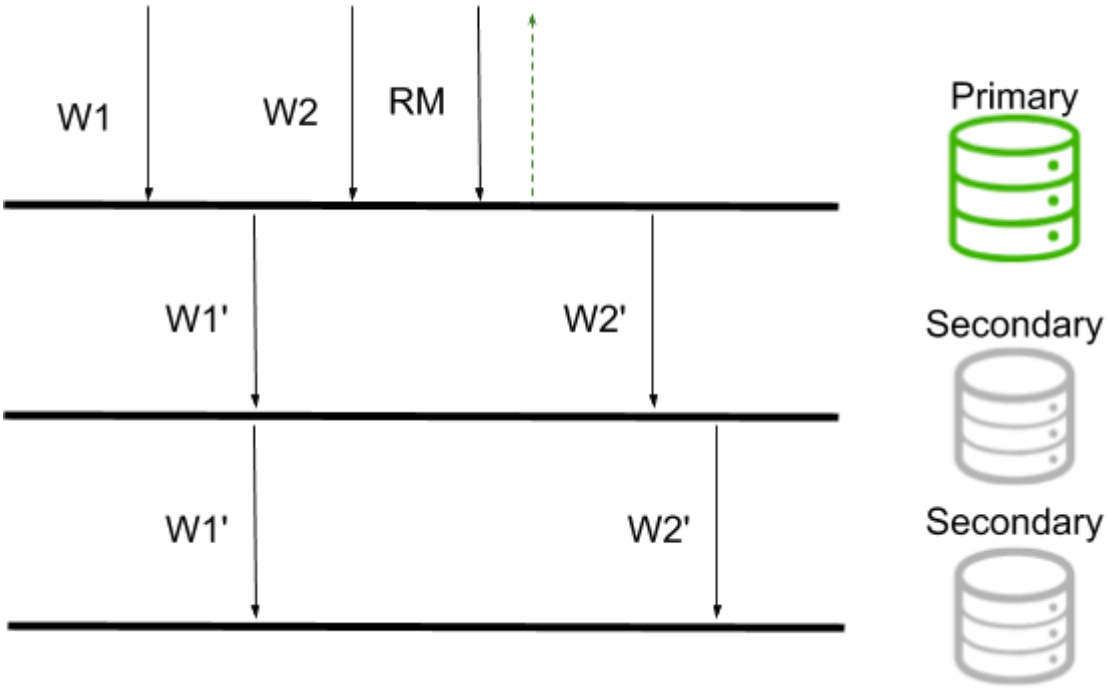
The difference between `majority` and `linearizable` lies in sense of causal consistency that `linearizable` enforces.

Let us look into this in detail:

When reading from a replica set with readConcern `majority` all documents that have been majority committed by the replica set will be returned to the application.

In the following diagram we have a set of operations taking place:

- W1 : first write operation
- W2 : second write operation
- RM : read with read concern majority.

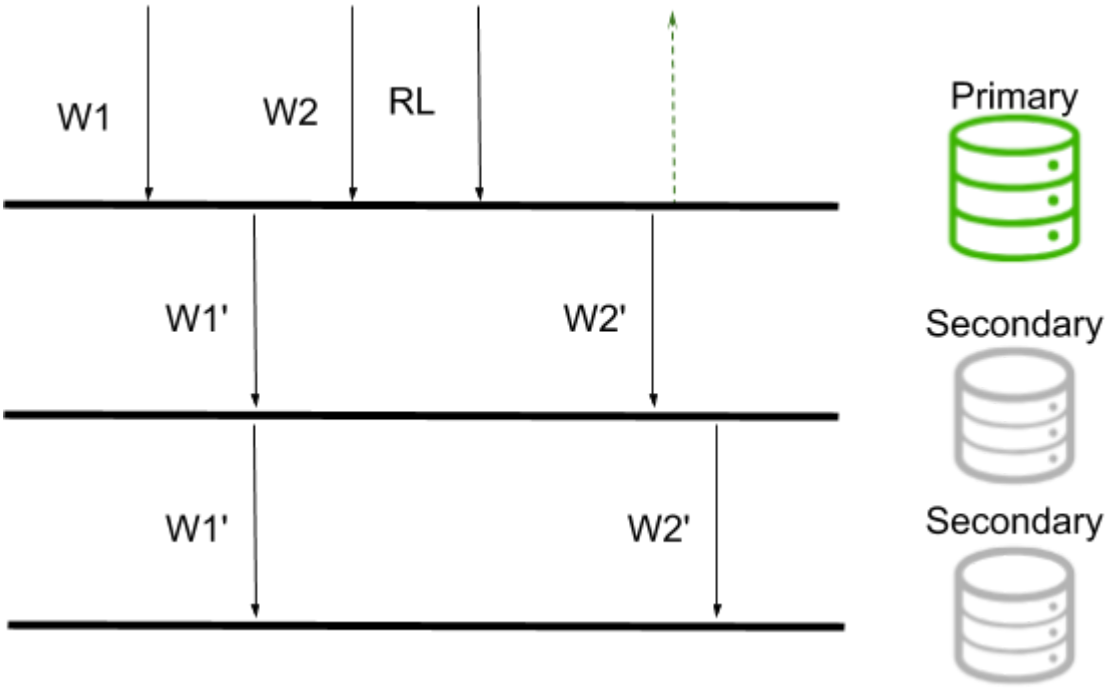


RM will return every document, matching the query selector, that has been majority committed, by the time the server receives the **RM**. In this case, **W1** would be returned.

Read concern `linearizable` will wait for all prior writes to be replicated to a majority of nodes before it returns a response.

In the following diagram we have:

- W1 : first write operation
- W2 : second write operation
- RL : read with read concern linearizable



The response for the read operation will wait until all writes, received by the server prior to **RL**, are majority committed before returning the document to the client. In this case, both **W1** and **W2** would be available to be returned to the client.