

HintedHandoff

If a write is made and a replica node for the key is down (and `hinted_handoff_enabled == true`), Cassandra will write a hint to:

versions prior to 1.0: a live replica node

version 1.0: the coordinator node

indicating that the write needs to be replayed to the unavailable node. If `ConsistencyLevel.ANY` was specified, the hint will count towards consistency if no replica nodes are alive for this key. Cassandra uses hinted handoff as a way to (1) reduce the time required for a temporarily failed node to become consistent again with live ones and (2) provide extreme write availability when consistency is not required.

A hinted write does NOT count towards `ConsistencyLevel` requirements of `ONE`, `QUORUM`, or `ALL`. Take the simple example of a cluster of two nodes, A and B, and a replication factor of 1 (each key is stored on one node). Suppose node A is down while we write key K to it with `ConsistencyLevel.ONE`. Then we must fail the write: recall from the [API](#) page that "if $W + R > \text{ReplicationFactor}$, where W is the number of nodes to block for on write, and R the number to block for on reads, you will have strongly consistent behavior; that is, readers will always see the most recent write."

Thus if we write a hint to B and call the write good because it is written "somewhere," there is no way to read the data at any `ConsistencyLevel` until A comes back up and B forwards the data to him. Historically, only the lowest `ConsistencyLevel` of `ZERO` would accept writes in this situation; for 0.6, we added `ConsistencyLevel.ANY`, meaning, "wait for a write to succeed anywhere, even a hinted write that isn't immediately readable."

For more details, see <http://www.datastax.com/dev/blog/modern-hinted-handoff>

<https://c.statcounter.com/9397521/0/fe557aad/1/> | stats