

Core Concepts

Value

Value

Key

Key



Metadata

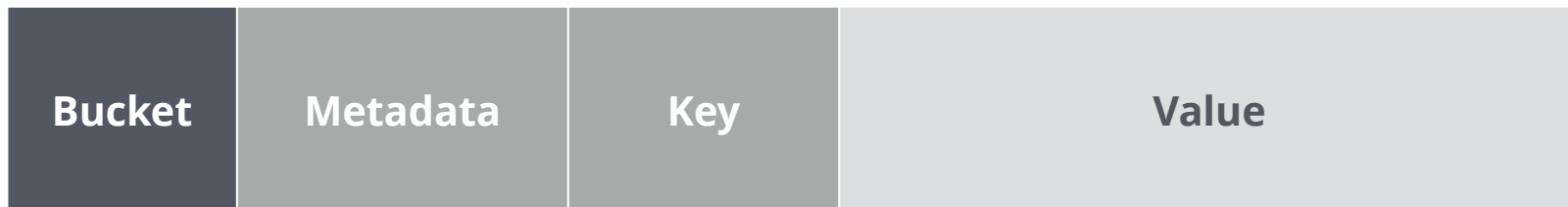
Metadata

Bucket

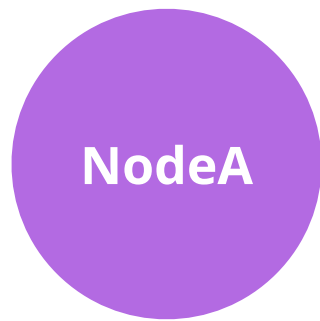
Bucket



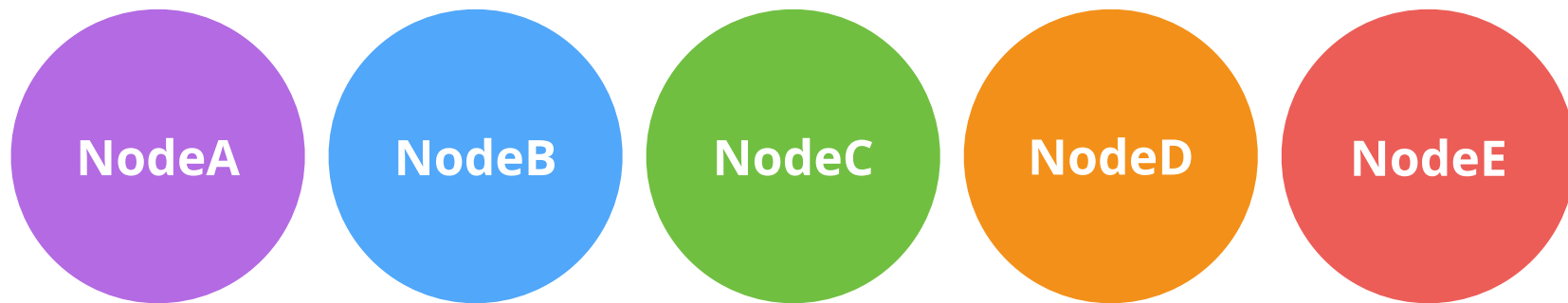
Riak Object



Node



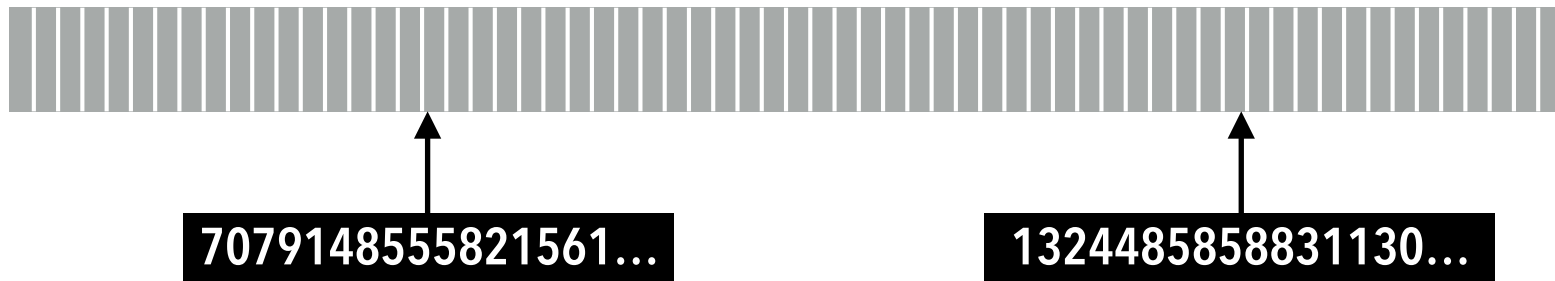
Cluster



Key/Hash Space



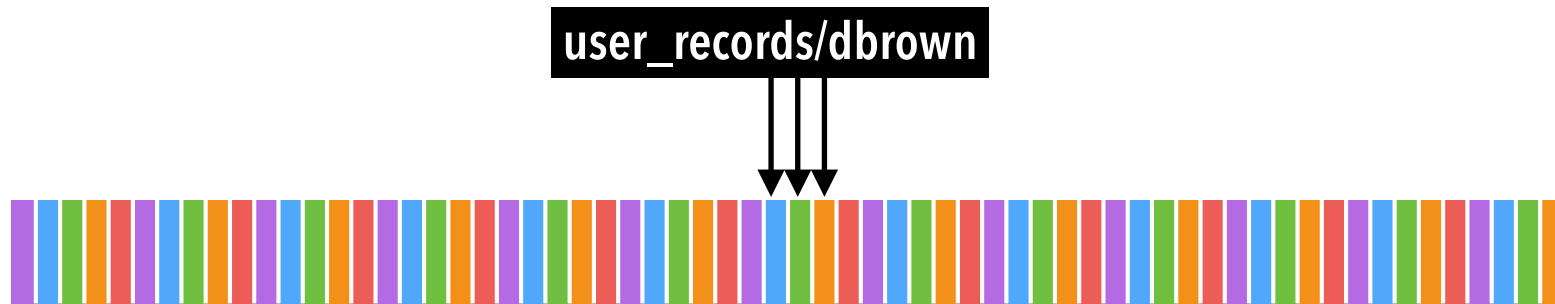
Partition



Partition Distribution



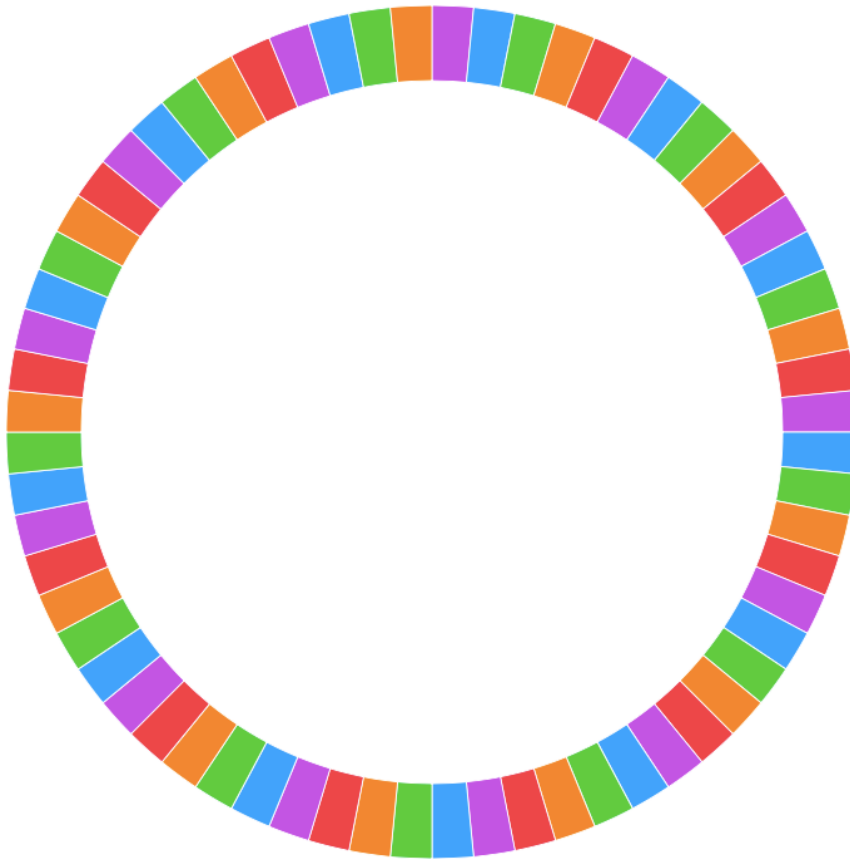
Replication



user_records/dbrown



Consistent Hashing



NodeA

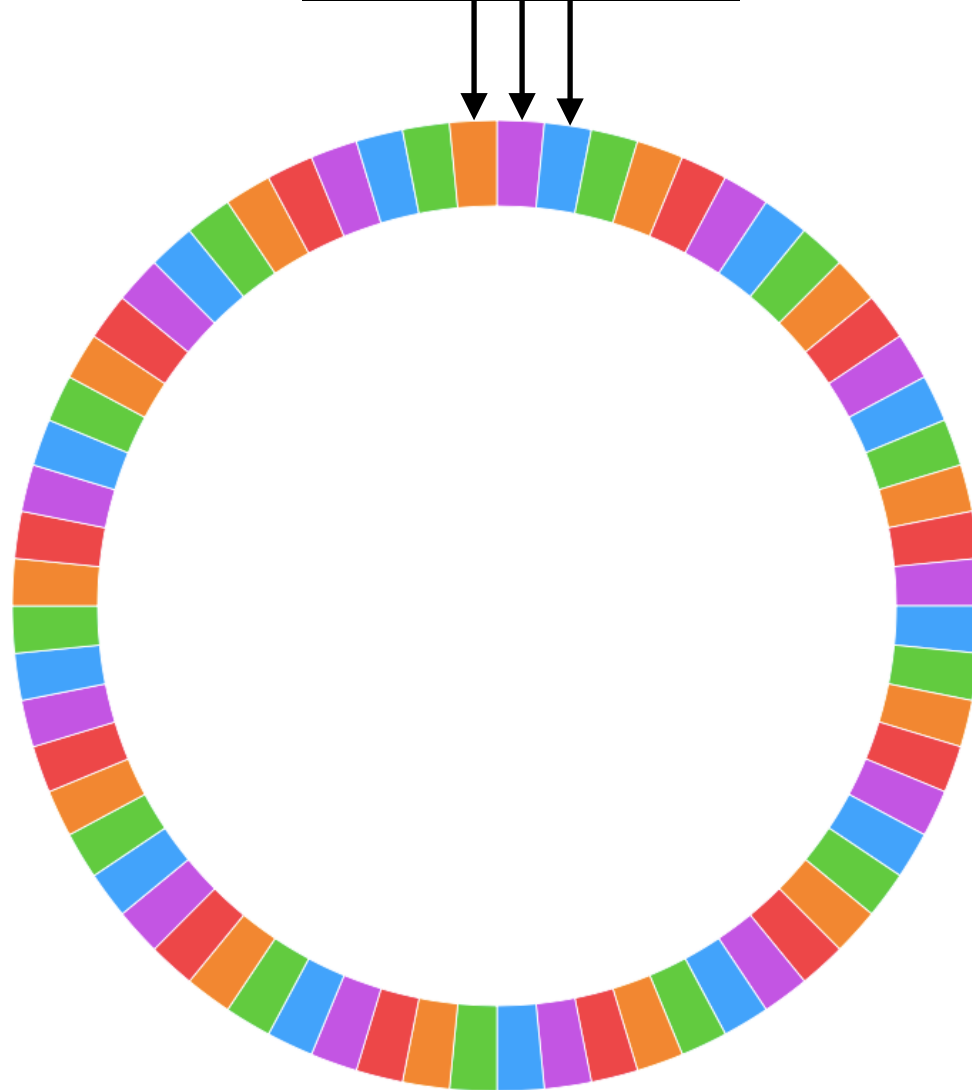
NodeB

NodeC

NodeD

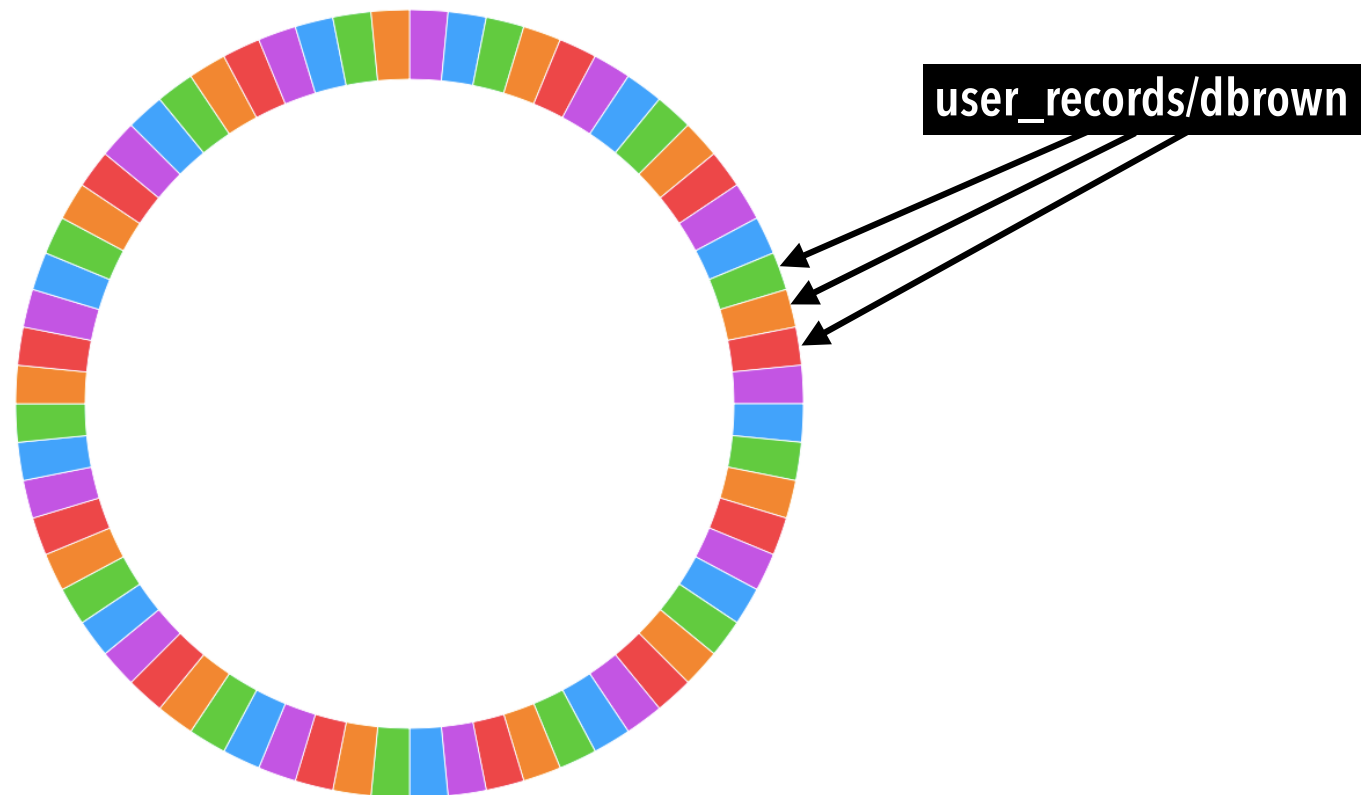
NodeE

user_records/dbrown



basho

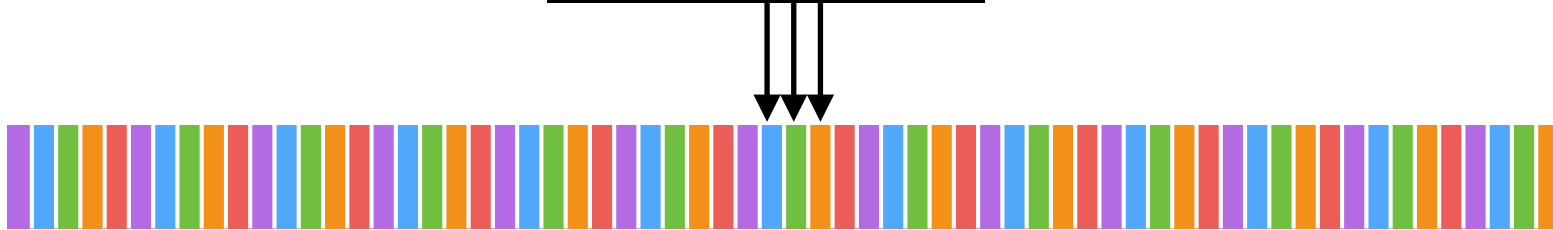
Replication



Handoff

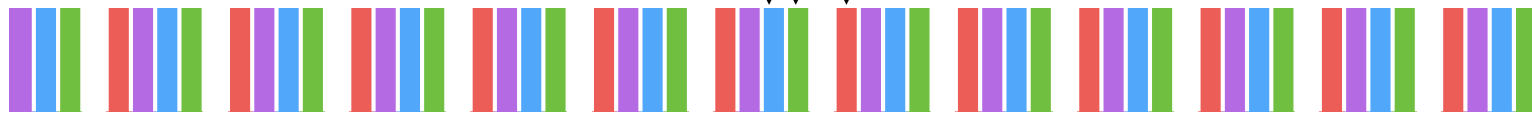
Hinted Handoff

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user_records/dbrown
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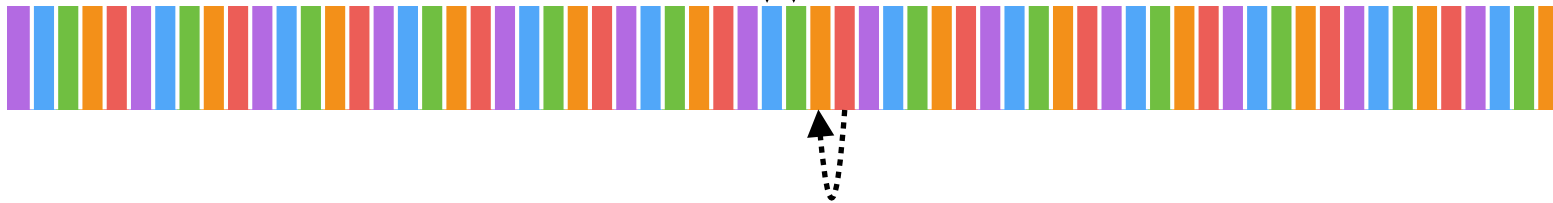


basho

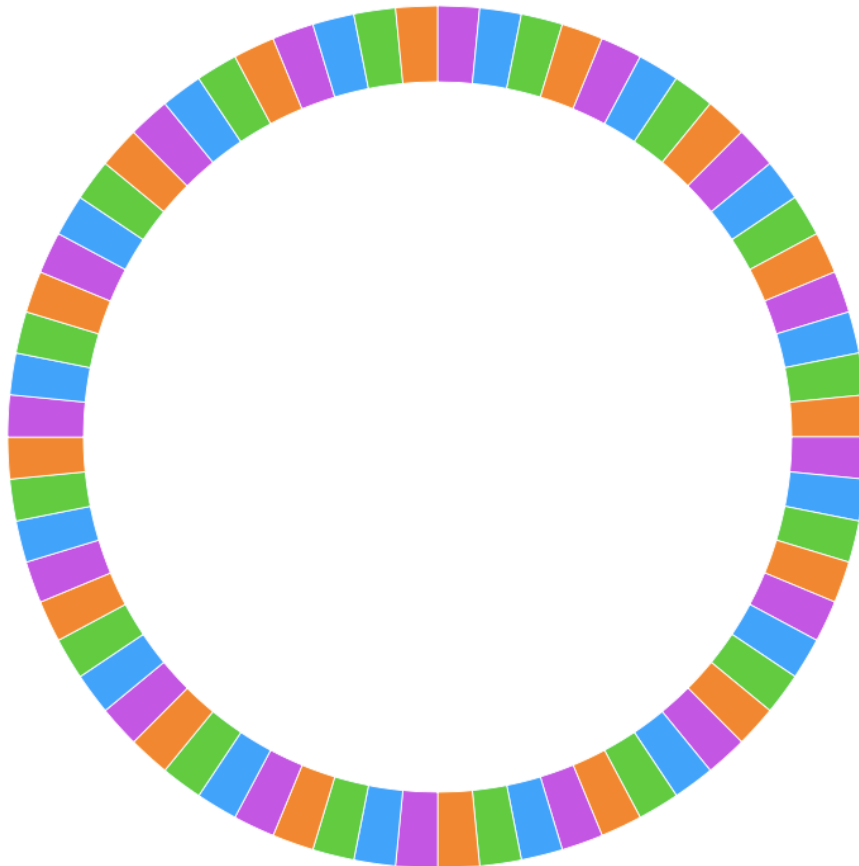
user_records/dbrown



user_records/dbrown



Ownership Handoff



NodeA

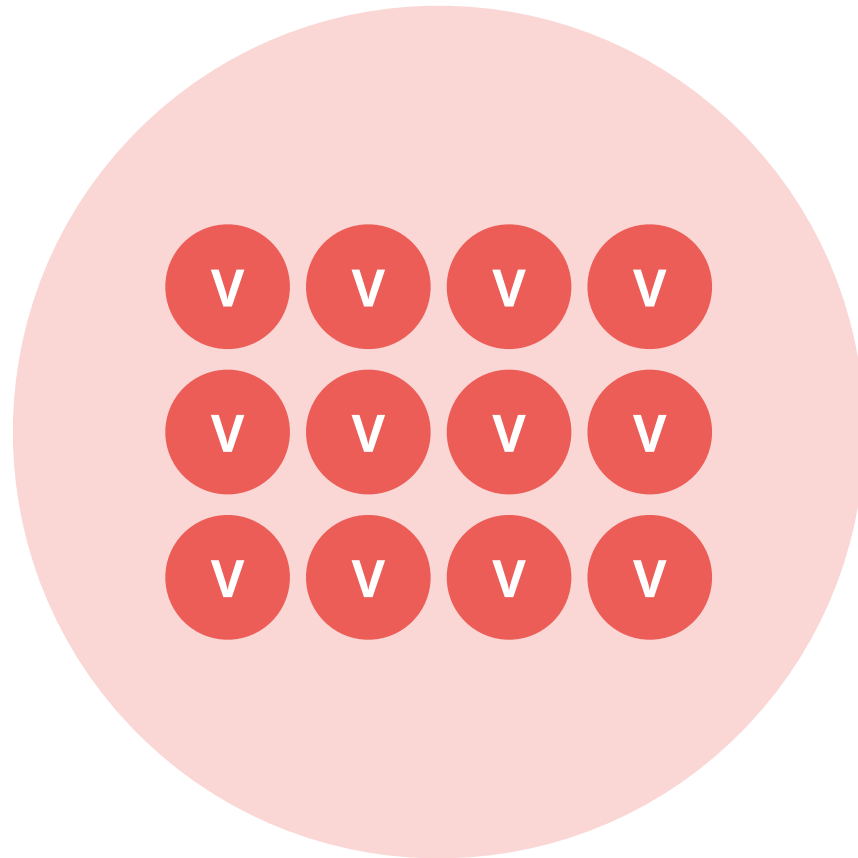
NodeB

NodeC

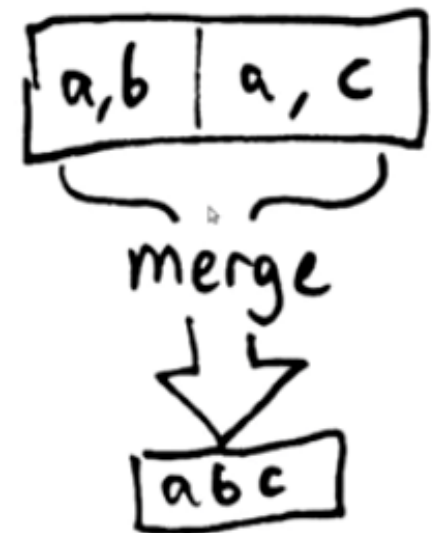
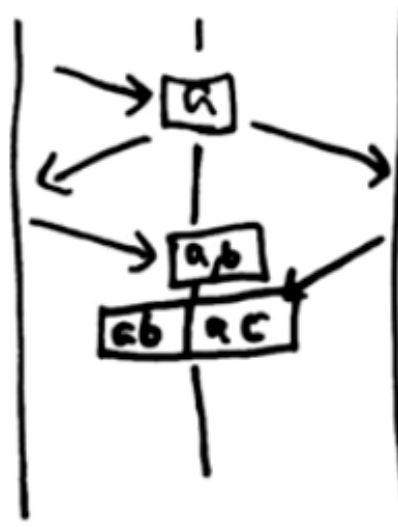
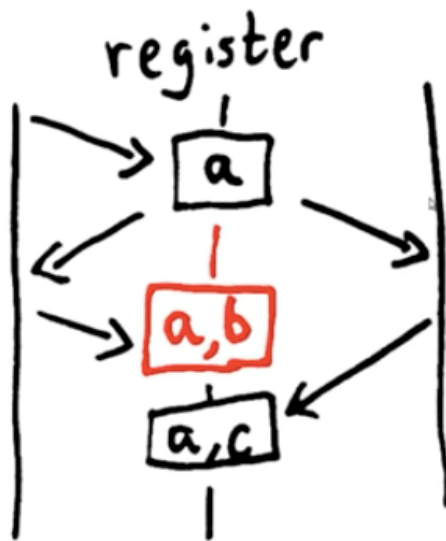
NodeD

NodeE

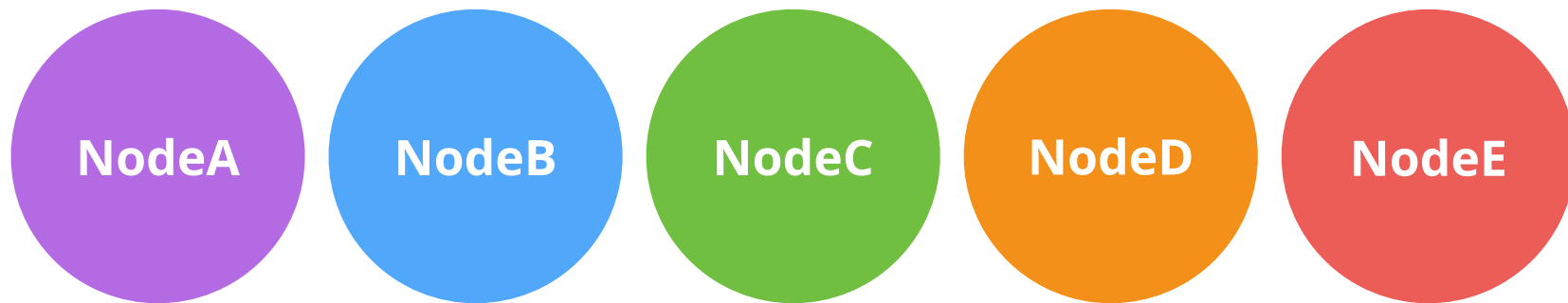
Vnode



Vector Clocks & Siblings



Quorum



Request Quorums

- Every request contacts all replicas of key
- N - number of replicas (default 3)
- R - read quorum
- W - write quorum