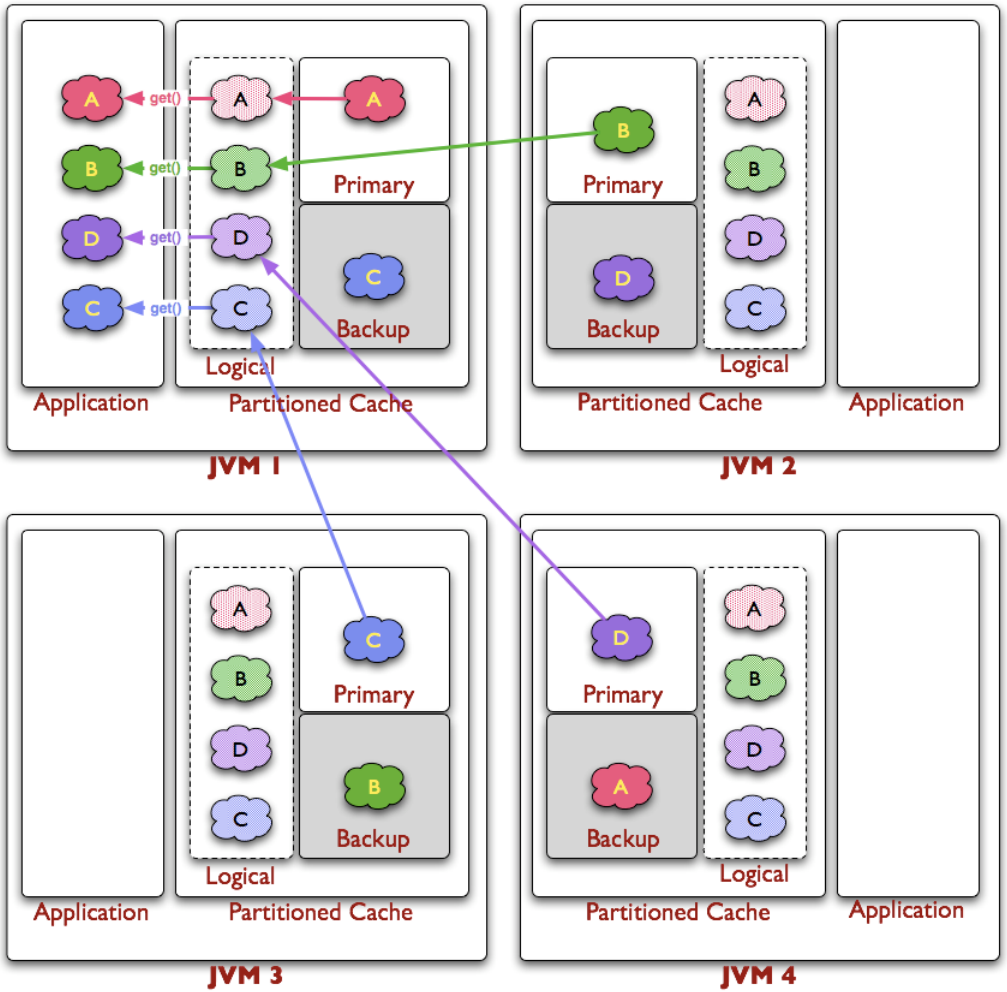
How Coherence Works

Distributed Data Management (access)

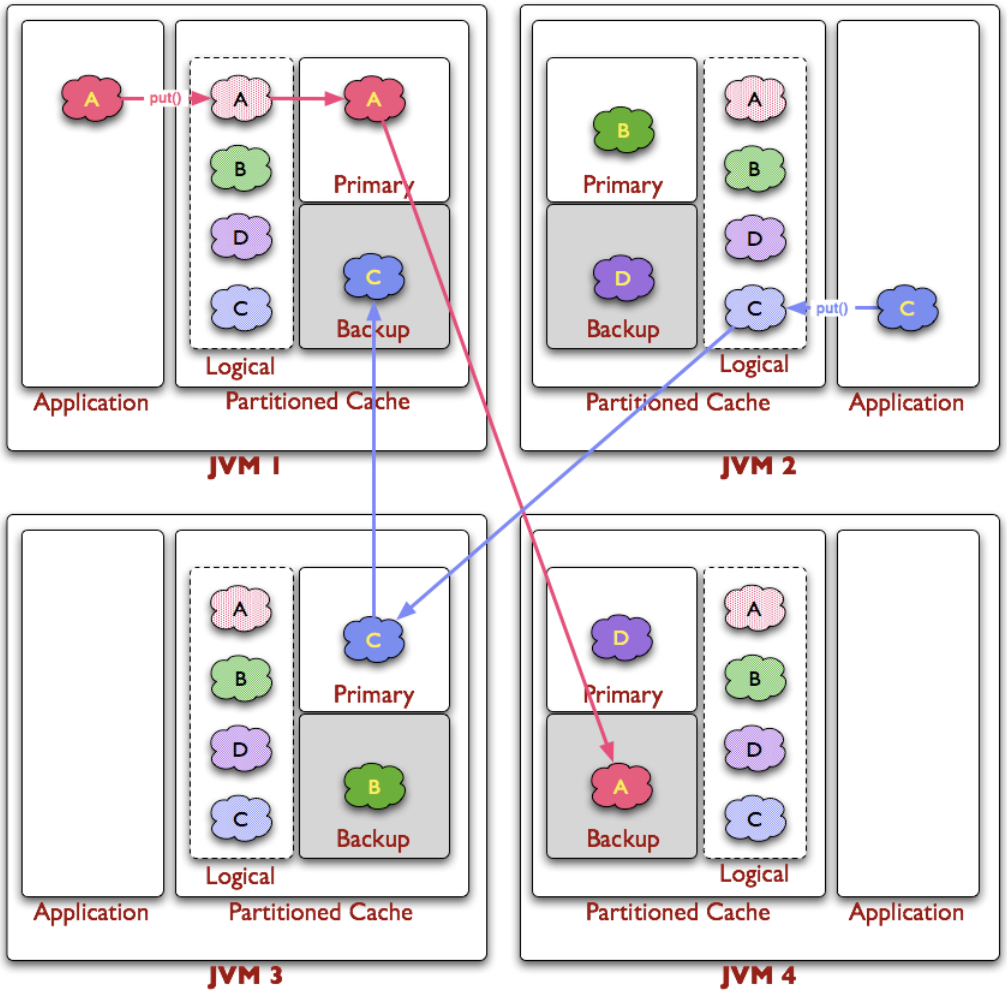
The Partitioned Topology

(one of many)

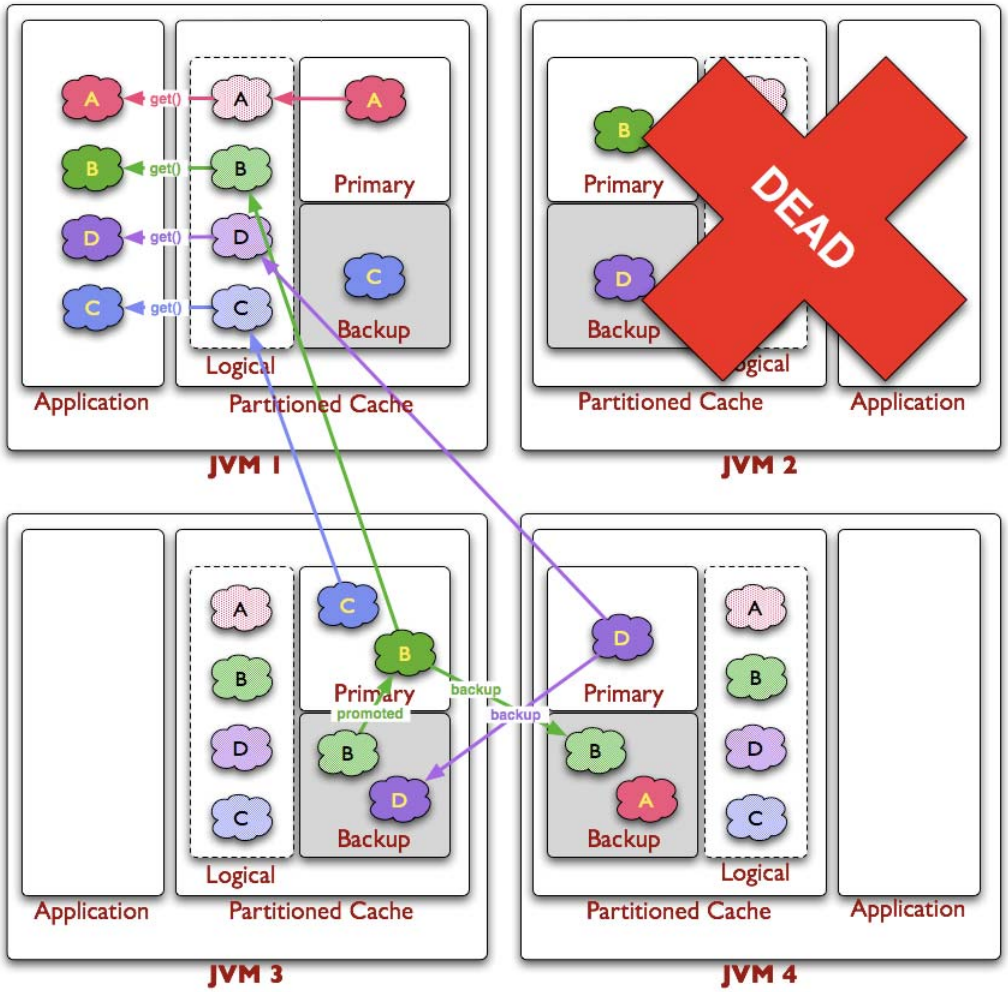
In-Process Data Management



Distributed Data Management (update)



Distributed Data Management (failover)



Distributed Data Management

- Members have logical access to all Entries
  - At most 2 network operations for Access
  - At most 4 network operations for Update
  - Regardless of Cluster Size
  - Deterministic access and update behaviour (performance can be improved with local caching)
- Predictable Scalability
  - Cache Capacity Increases with Cluster Size
  - Coherence Load-Balances Partitions across Cluster
  - Point-to-Point Communication (peer to peer)
  - No multicast required (sometimes not allowed)

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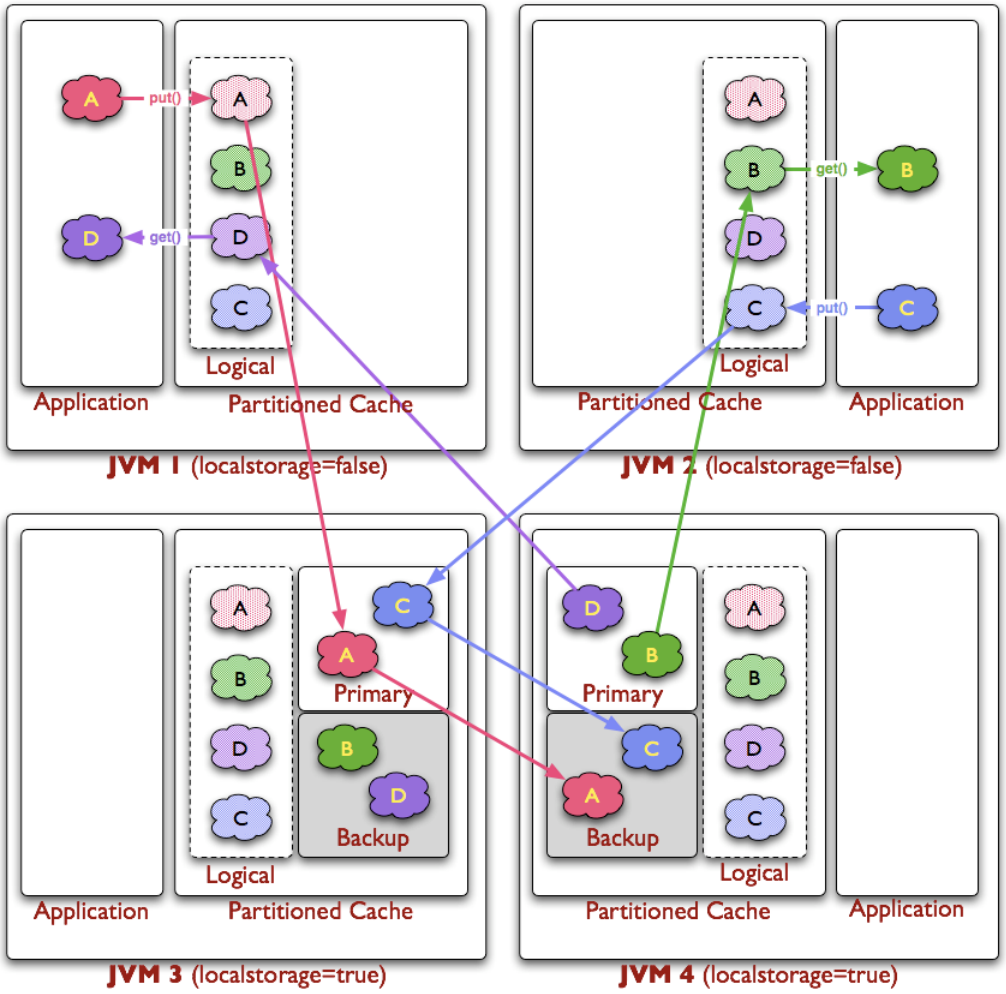
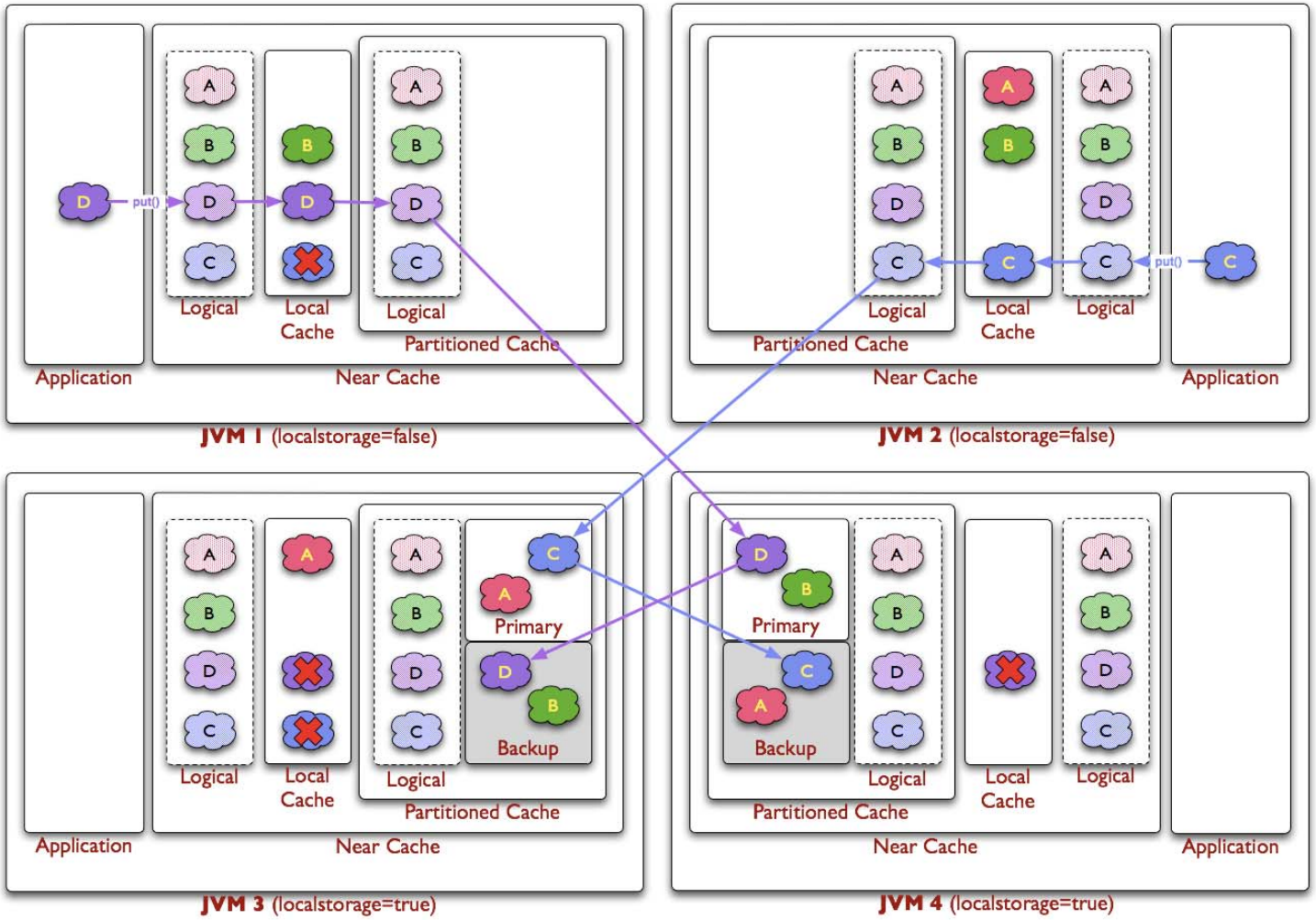
Data Distribution: Clients and Servers

"Clients" with storage disabled

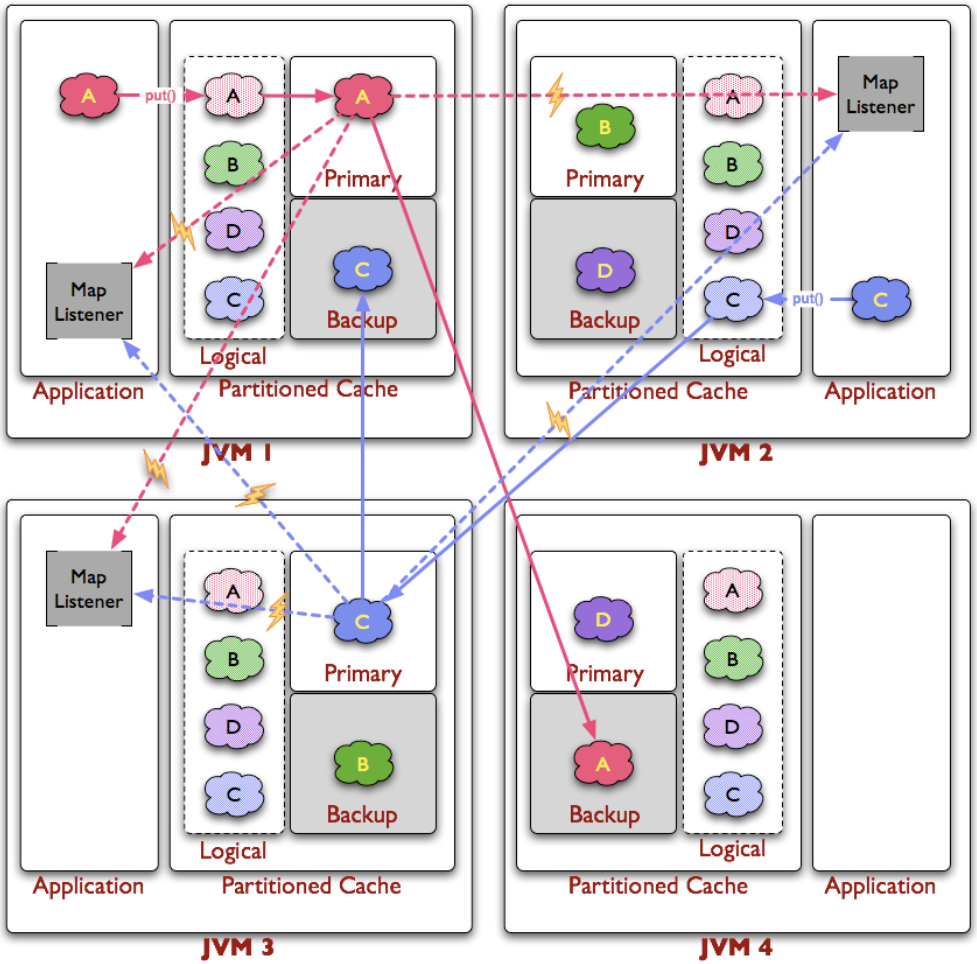
"Servers" with storage enabled



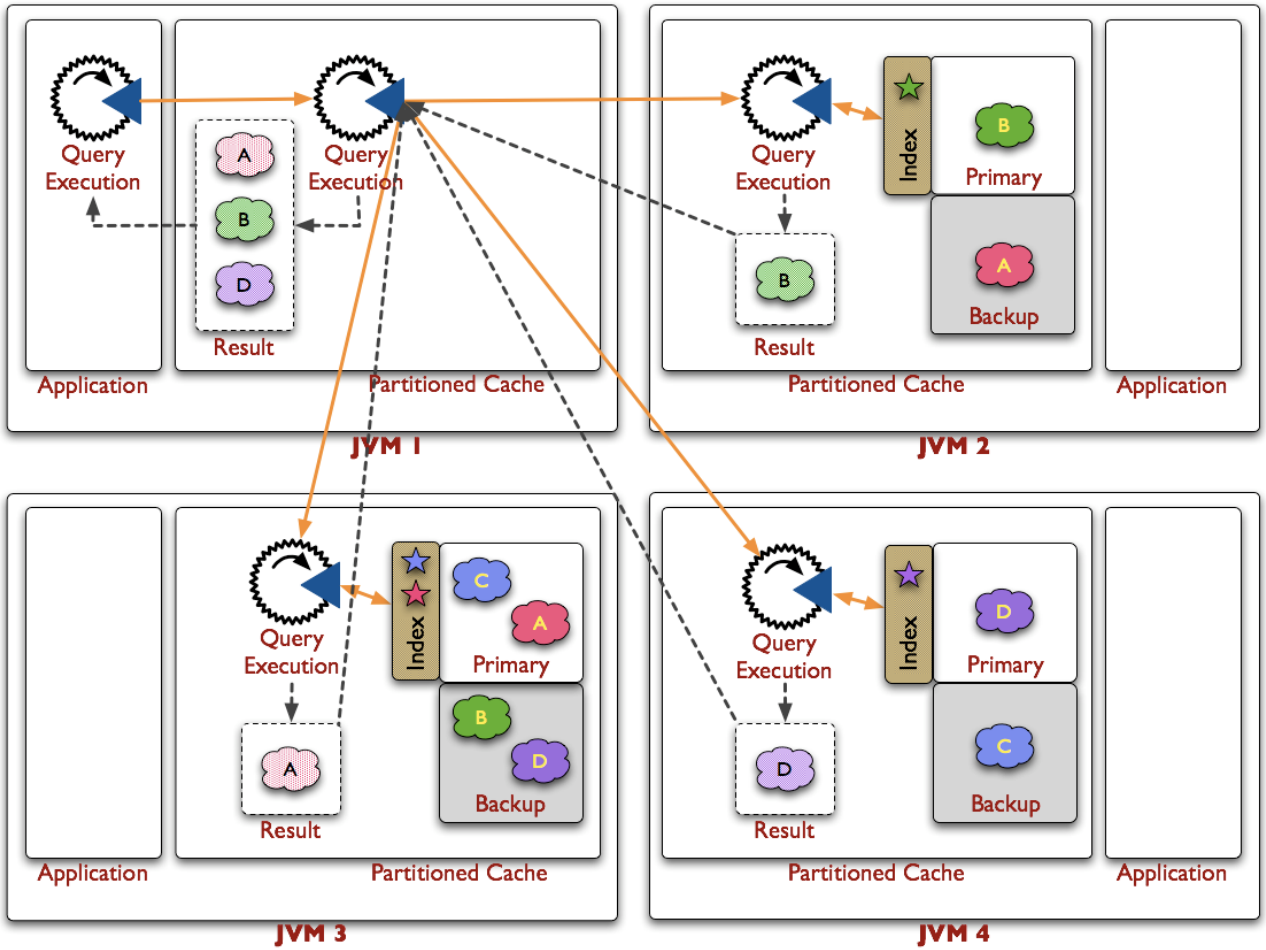
Near Caching (L1 + L2) Topology



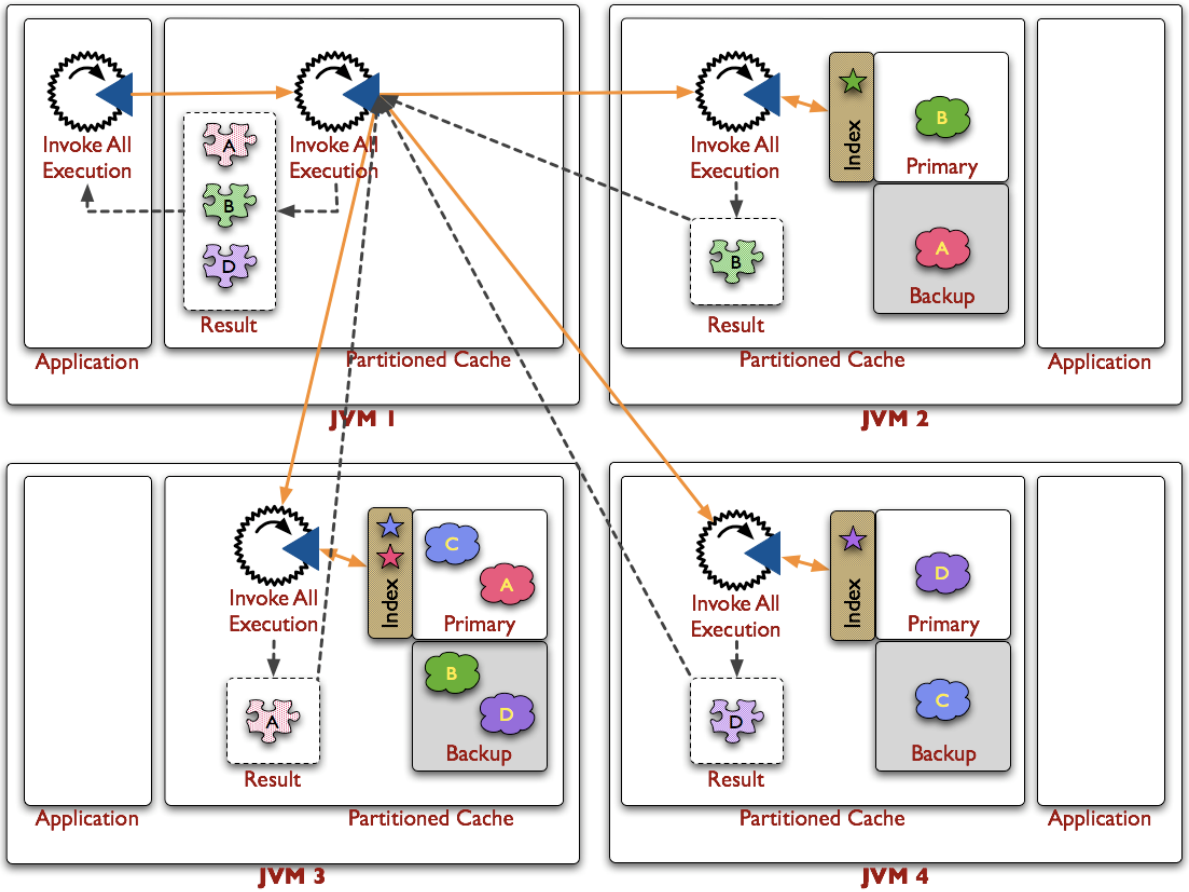
Observing Data Changes



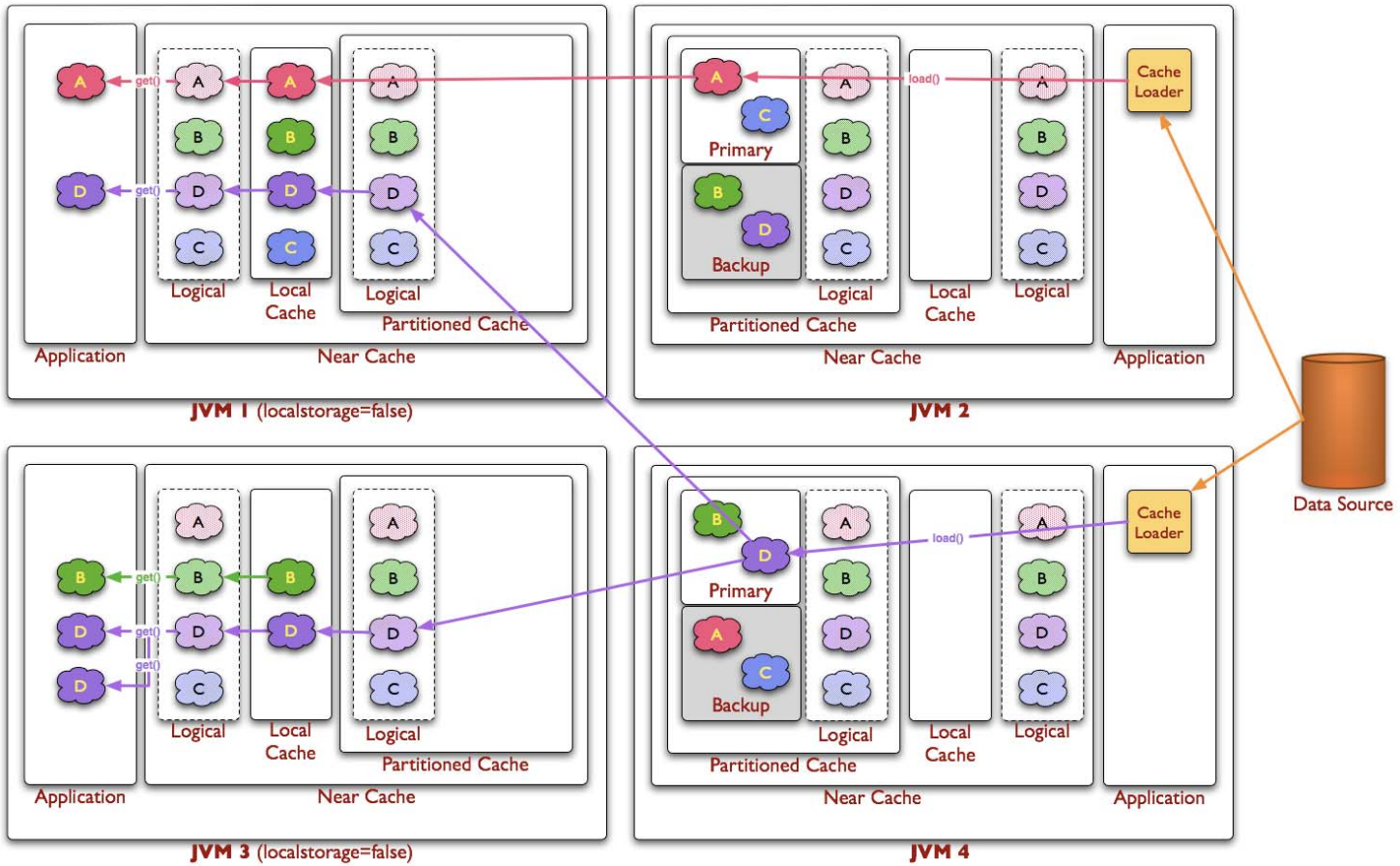
Parallel Queries



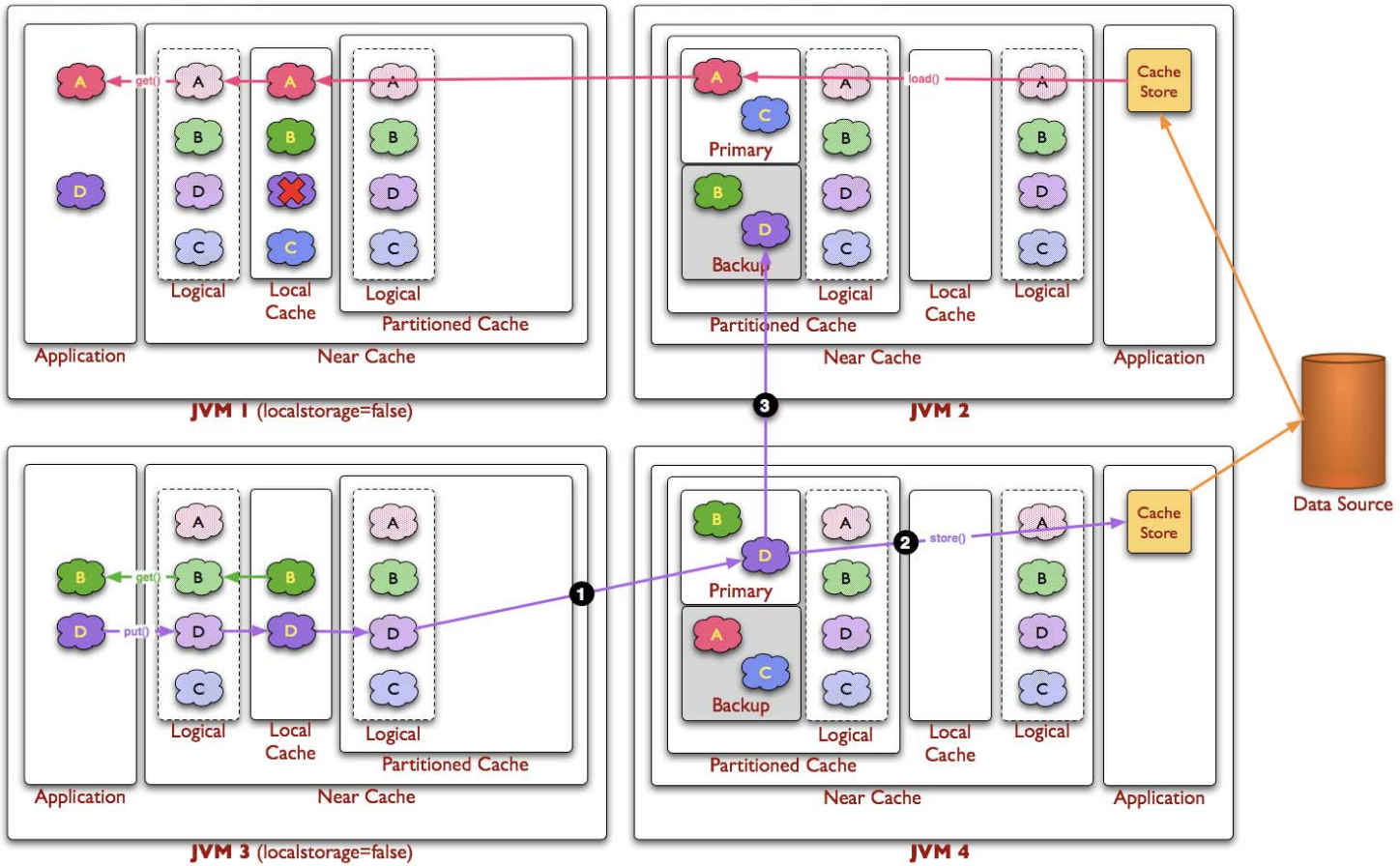
Parallel Processing and Aggregation



Data Source Integration (read-through)



Data Source Integration (write-through)



Data Source Integration (write-behind)