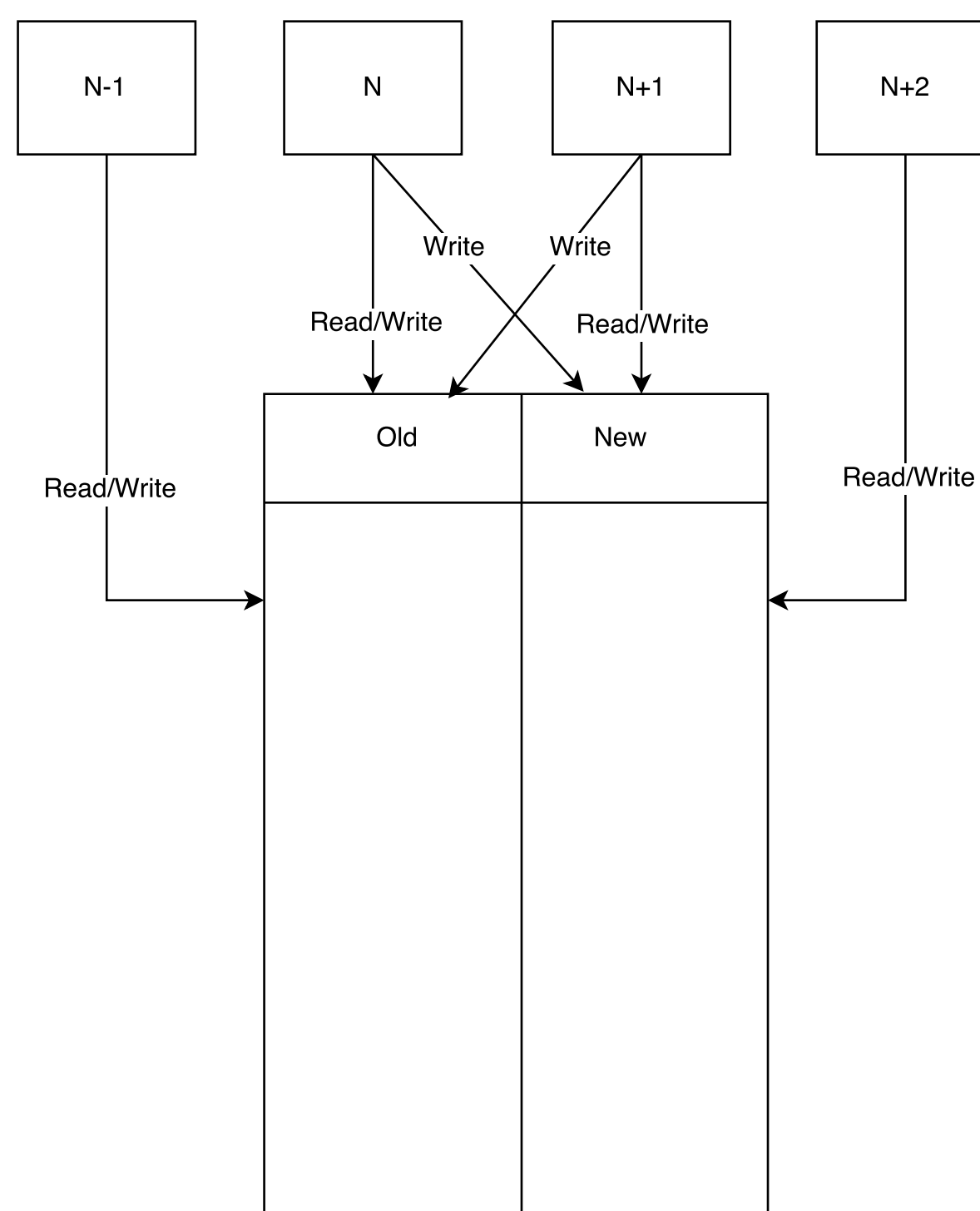# Database Strategy for Glance Rolling Upgrades

- Old and new services co-exist
- Changes that could have an impact:
  - API changes
  - Database changes (we'll focus on this primarily today)
  - RPC changes
- Two existing approaches:
  - Nova's Oslo.VersionedObjects approach
    - Very heavy for Glance
  - Cinder's expand/contract approach over multiple cycles
    - A bit cumbersome and delayed impact of changes
- Goal: Do it in one cycle
- Solution: Expand/Contract style migrations with triggers for mediation
  - Separate schema and data migrations
  - Separate additive and non-additive migrations
  - Apply additive changes while the old services are still running (expand)
  - Add triggers to keep the data in sync between old and new columns
  - Migrate data from old to new column
  - Deploy new services in a rolling fashion
  - Apply non-additive changes and remove triggers (contract)

Cinder's Expand/Contract Strategy

Glance Rolling Upgrades with Triggers