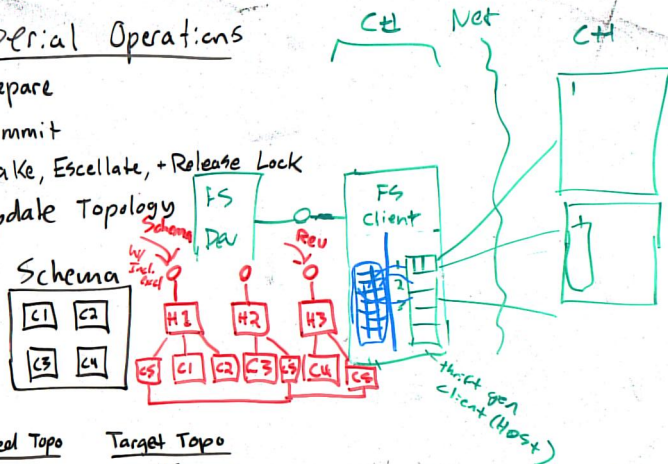
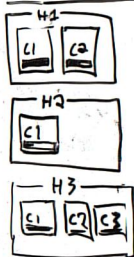


## Serial Operations

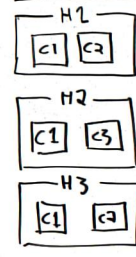
- Prepare
- Commit
- Take, Escalate, + Release Lock
- Update Topology



Realized Topo



Target Topo



## Transaction ID Strategy

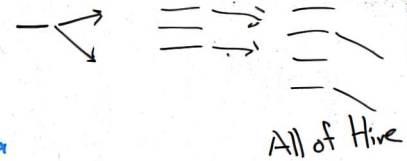
- Use Rev / GUID combo - gen on client
- Client receives latest Rev w/ each call
- Client records age of Rev and refreshes if stale

Host State

- Checkpointing Syncing - for col?
- Unreachable
- Offline
- Online

## Topo Changes

- Add Column
- Remove Column
- Update Column Metadata
- Change Host Map



## 3.5. Pre-apply

1. Prepare Changes with TransactionID
  - a. Conflict Failure - Majority
    - Tell Client
  - b. No Majority
    - Repair
  - c. Success - return rev

## 5. Apply Changes w/Rev + Transaction ID

- a. No Maj - repair
  - b. Success
6. If policy - call WaitForDurable

## Transaction Processing

1. Client Broadcasts Begin To Hive
2. Client Gets Majority from Hive
3. Client Makes Get Requests
  - a. Majority Revision Matches
    - Good
  - b. Majority Revision Differs
    - Call Revision
    - Need Majority to continue
  - c. No Majority
    - Repair
- 3.2. Client changes kept locally.