Distributed Registry Protocol - DRiP Overview and Next Steps

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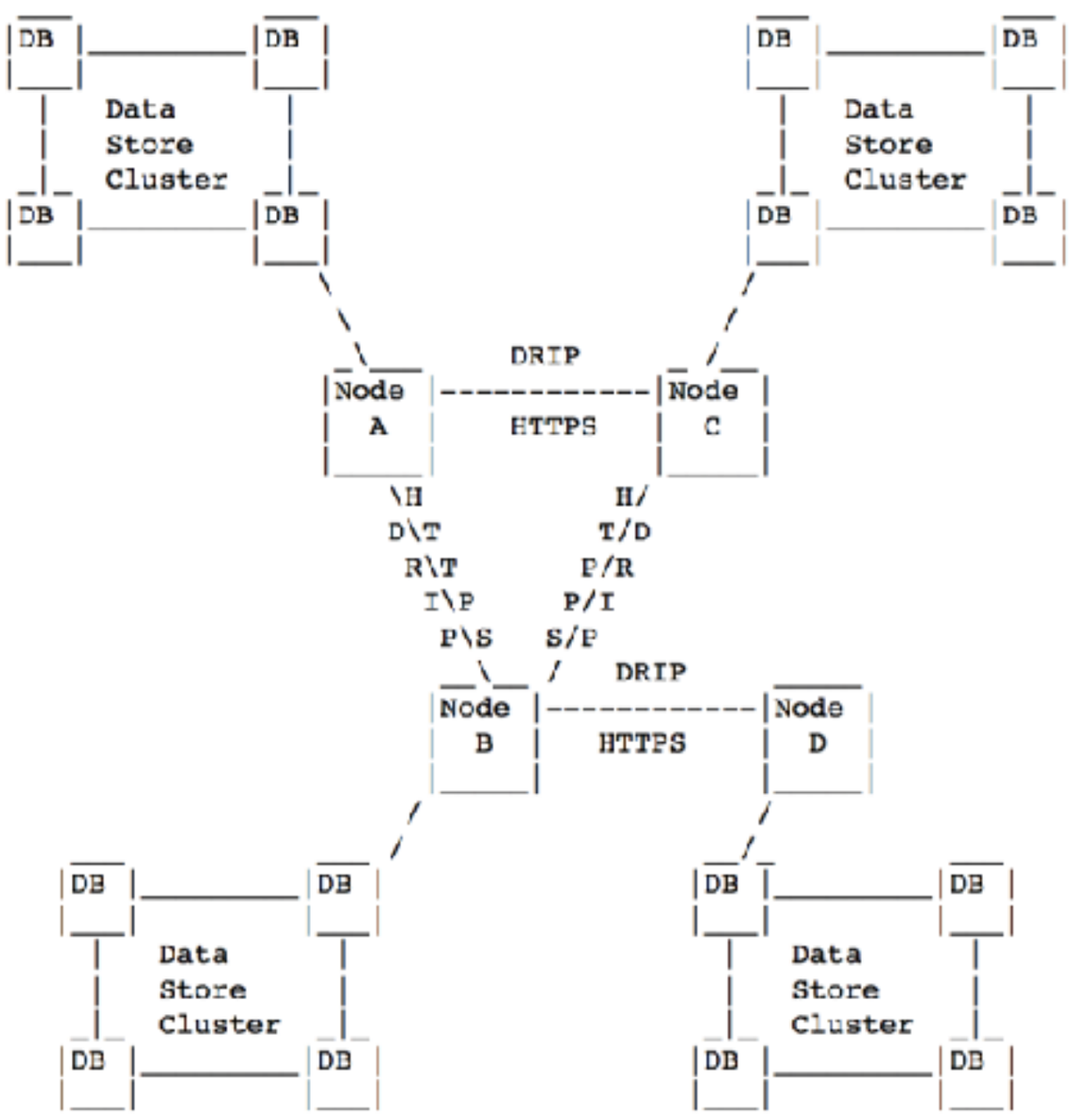
Overview

- DRiP is a HTTP based protocol for sharing registry type of information between interconnected nodes across a network

- It uses a gossip protocol for complete distribution across interconnected nodes

- It incorporates a voting mechanism to avoid conflicting data updates or race conditions

Distributed Mesh



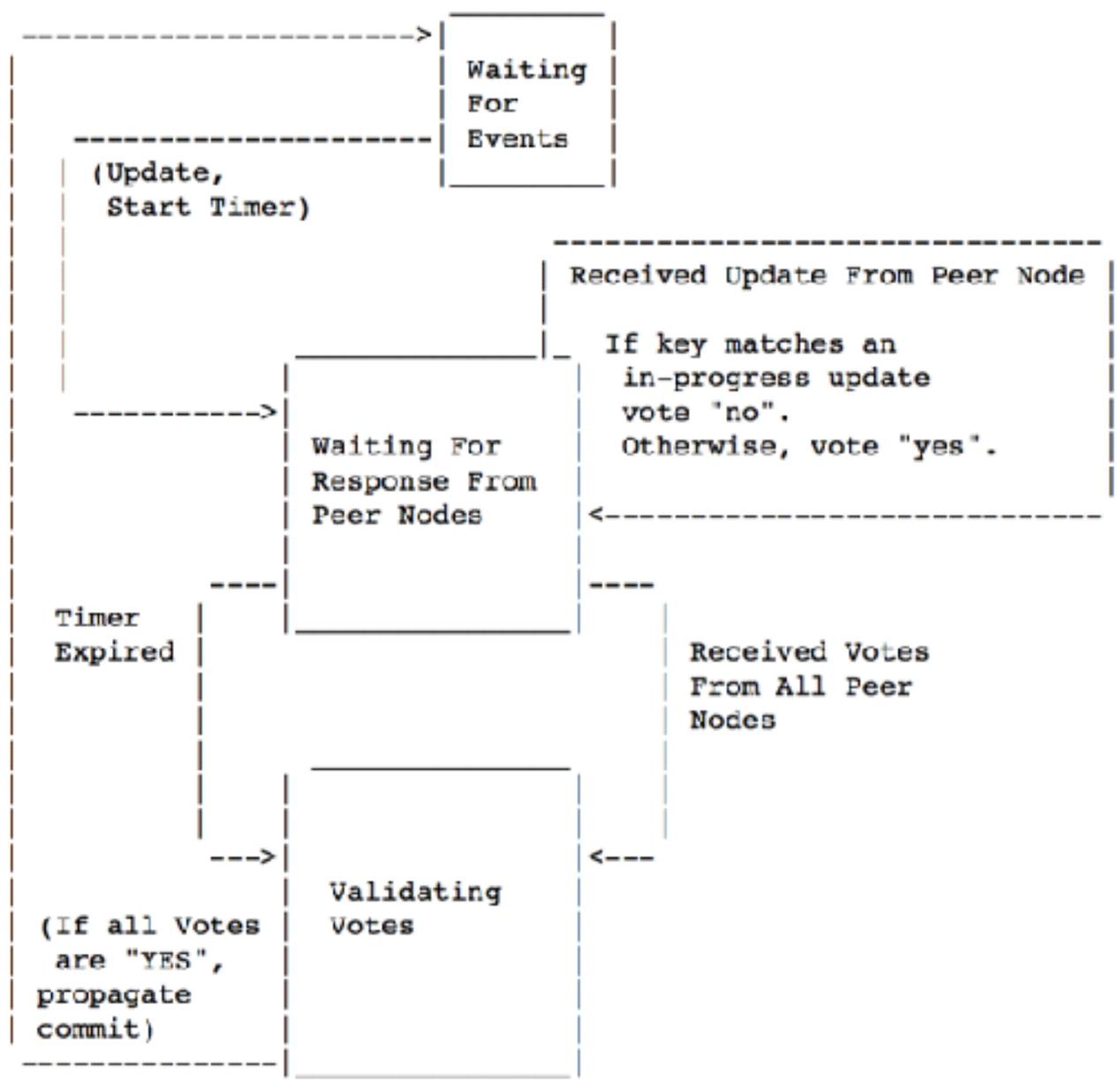
Transactions

- Two basic transactions
  - Update - A node has new or modified key-value data and would like to update peer nodes
  - Sync - A node is either newly established or was in an inactive state for a period of time and requests a peer to provide a full update of data to make sure it is fully synchronized with network.

Voting and Commit Phases for Update

- When initiator node has new data, it initiates an Update
- Update consists of a two-phase commit procedure to avoid race conditions or potential error conditions
- Two phases are called:
  - voting phase
  - commit phase

Voting and Commit Phases for Update



Authentication/Entitlement

- Would like to incorporate a token based policy model similar to draft-ietf-acme-service-provider-00
- Both for authentication to the distributed mesh as well as for entitlement for writes and modifies.

Where do we go from here?

- What is our path to adopt as WG document?
- We have a implementation we are willing to share but want to make sure there is legs for this work.