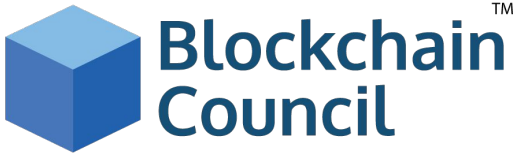

Certified Blockchain Expert

Hyperledger Fabric Data Distribution Protocol

Gossip Protocol

- Gossip protocol is a secure, reliable and scalable data dissemination protocol to ensure data integrity and consistency.
- Through a process called gossip, the peers themselves do the job of spreading the word to each other.
- Hyperledger Fabric uses gossip between peers as a fault-tolerant and scalable mechanism for keeping all copies of the blockchain ledger in sync.
- It also reduces load on the orderer, which only needs to deliver blocks to a single peer per organization, and allows peers to “catch up” to the current state after being disconnected.

How it works?

- Each peer forwards new data to a randomly-selected subset of the peers of the channel using broadcast process, and it's a push-based way to move information through the network.
- If a peer became disconnected from the network and reconnects later, it would've missed the broadcast process so it needs a pull-based mechanism to request the data it's missing.
- In Hyperledger Fabric, peers periodically exchange both:
  - membership data (the list of peers, alive and dead)
  - ledger data (transaction blocks) with each other.

Functions of Gossip Protocol

- The gossip-based data dissemination protocol performs three primary functions on a Hyperledger Fabric network:
  - Manages peer discovery and channel membership, by continually identifying dead or alive peers..
  - Disseminates ledger data across all peers on a channel, so if any peer goes out of sync, then channel identifies the missing blocks and syncs itself by copying the correct data.
  - Bring newly connected peers up to speed by allowing peer-to-peer state transfer update of ledger data.

THANK YOU!

Any questions?

You can mail us at

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