



Advantages and Disadvantages of Quorum

Advantages

- A private, permissioned blockchain through which peers communicate in a secured environment.
- No global broadcasting. Data is shared to authenticated user.
- Quorum consensus protocol is simple majority voting protocol.
- For secure message transfers, Quorum uses HTTP messaging protocol.
- Communication between the nodes is carried out through the Ethereum P2P protocol.
- For data privacy, Quorum uses cryptography and segmentation mechanism. Cryptography is applied to the data in transactions and segmentation is applied to each node's local state database.

Disadvantages

- It is mainly helpful in solving financial problems.
- It is not intended to provide solution to all general problems.
- Only less resources are available as it is a relatively new technology.
- Like all voting algorithms, there is a lot of messaging overhead that gets exponentially worse as the number of nodes increases.
- It does not support native cryptocurrency. There might be some cases requiring native currency which is not supported in Quorum.

Trade-offs

Permissioned Vs Permissionless:

- If Quorum is made permissionless, nodes can join effortlessly but they will not be verified.
- If Quorum is made permissioned, nodes will need permission to join which will increase security but it will add centralization which is not an aspect of the nature of a blockchain.

Point-to-point vs Global:

- If Quorum uses global broadcasting, message will be shared to all nodes but there is an increased risk of privacy leak.
- If point-to-point message passing is used, message will be shared to only relevant node and private information will be secured.

Trade-offs

Code-in-law Vs existing legal systems

- If Quorum follows traditional legal systems, it will become easy to solve conflicts and authorities can add or modify sections as it is under legal rules and regulations but it is open to human intervention and natural disaster.
- If Quorum writes sections in code and adds it to the blockchain, it will not be easy to modify it without permission of authority but it is not under any rules and regulations.

Build Vs Re-use

- If Quorum doesn't increase its robustness, it will have to start from the beginning which will provide it the flexibility to develop according to new requirements but the time to market will increase.
- If Quorum uses previously built technology, the time to market will reduce but it may not gain the exact level of flexibility it needs.



THANK YOU!

Any questions?
You can mail us at
hello@blockchain-council.org