



3. Hybrid Blockchain

It is the mixed content of the private and public blockchain, where some part is controlled by some organization and other makes are made visible as a public blockchain.

- It is a combination of both public and private blockchain.
- Permission-based and permissionless systems are used.
- User access information via smart contracts
- Even a primary entity owns a hybrid blockchain it cannot alter the transaction

Advantages:

- **Ecosystem:** Most advantageous thing about this blockchain is its hybrid nature. It cannot be hacked as 51% of users don't have access to the network
- **Cost:** Transactions are cheap as only a few nodes verify the transaction. All the nodes don't carry the verification hence less computational cost.
- **Architecture:** It is highly customizable and still maintains integrity, security, and transparency.
- **Operations:** It can choose the participants in the blockchain and decide which transaction can be made public.

Disadvantages:

- **Efficiency:** Not everyone is in the position to implement a hybrid Blockchain. The organization also faces some difficulty in terms of efficiency in maintenance.
- **Transparency:** There is a possibility that someone can hide information from the user. If someone wants to get access through a hybrid blockchain it depends on the organization whether they will give or not.
- **Ecosystem:** Due to its closed ecosystem this blockchain lacks the incentives for network participation.

Use Case: It provides a greater solution to the health care industry, government, real estate, and financial companies. It provides a remedy where data is to be accessed publicly but needs to be shielded privately. Examples of Hybrid Blockchain are Ripple network and XRP token.



4. Consortium Blockchain

It is a creative approach that solves the needs of the organization. This blockchain validates the transaction and also initiates or receives transactions.

- Also known as Federated Blockchain.
- This is an innovative method to solve the organization's needs.
- Some part is public and some part is private.
- In this type, more than one organization manages the blockchain.

Advantages:

- **Speed:** A limited number of users make verification fast. The high speed makes this more usable for organizations.
- **Authority:** Multiple organizations can take part and make it decentralized at every level. Decentralized authority, makes it more secure.
- **Privacy:** The information of the checked blocks is unknown to the public view. but any member belonging to the blockchain can access it.
- **Flexible:** There is much divergence in the flexibility of the blockchain. Since it is not a very large decision can be taken faster.

Disadvantages:

- **Approval:** All the members approve the protocol making it less flexible. Since one or more organizations are involved there can be differences in the vision of interest.
- **Transparency:** It can be hacked if the organization becomes corrupt. Organizations may hide information from the users.
- **Vulnerability:** If few nodes are getting compromised there is a greater chance of vulnerability in this blockchain

Use Cases: It has high potential in businesses, banks, and other payment processors. Food tracking of the organizations frequently collaborates with their sectors making it a federated solution ideal for their use. Examples of consortium Blockchain are Tender mint and Multichain.