

Hyperledger

IN5420 Distributed Blockchain Technologies

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1 Hyperledger

Hyperledger is a blockchain protocol for handling business transactions between businesses and customers. It provides many of the same features as other notable blockchains, such as pluggable consensus and smart contracts. The white paper points out problems with existing blockchains that Hyperledger addresses, such as scalability issues, confidential and private transactions, time consummation and resilience, by having a modular blockchain implementation.

Hyperledger Fabric is an implementation of the Hyperledger project and protocol. Among its key concepts are the distributed ledger, smart contracts and consensus protocols. It is not public, like many other blockchains are, but permissioned. This is desirable because its target use cases are mostly in enterprise business. In order to facilitate business logic in an enterprise domain it has built in features for this purpose, such as *assets, chaincode, privacy through channels, security & membership services and consensus*.

2 BLOCKBENCH

BLOCKBENCH is a framework to analyzing private blockchains given the same workloads. It finds that Hyperledger significantly outperforms both Ethereum and Parity in several areas under certain, yet reasonable conditions. However, it finds that all three blockchain technologies are immature and not ready for deployment in real-world scenarios.