Distributed Web Applications with IPFS, Tutorial

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Abstract IPFS, the InterPlanetary File System, is the distributed and permanent Web, a protocol to make the Web faster, more secure, open and available. IPFS could be seen as Git meets a BitTorrent swarm, exchanging objects within one Git repository. In other words, IPFS provides a high throughput content-addressed block storage model, with content-addressed hyperlinks. This forms a generalised MerkleDAG, a data structure that can beused to build versioned file systems, blockchains, unix like file systems, amongst other options. IPFS combines a Distributed Hash Table, an incentivised block exchange and a self-certifying namespace. IPFS has no single point of failure, and nodes do not need to trust each other.

This tutorial will focus on the IPFS Application Stack, including: libp2p, the networking layer; bitswap for data exchange;IPLD and the MerkleDAG, the thin waist data structure of IPFS and how to use IPFS interface to build distributed applications. The full length of the tutorial is 6 hours.

1　Introduction

2　Motivations and goals

3　IPFS, the InterPlanetary FileSystem

4　Tutorial

4.1　Learning outcomes

4.2　Target audience

4.3　Curriculum

5　Presenter

6　Conclusion

6.1　Acknowledgments

References

All links were last followed on March 10, 2016.