

下一代互联网基础：IPFS

简介篇

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沉风

内容

- HTTP问题
- IPFS概况
- IPFS技术
- IPFS优势
- IPFS应用
- IPFS未来

HTTP问题

HTTP很脆弱

- SPOF单点故障
- MITM攻击
- DDOS攻击
- 隐私问题
- 404

HTTP导致超级中心化

- 美国：FLAG
- 中国：BAT

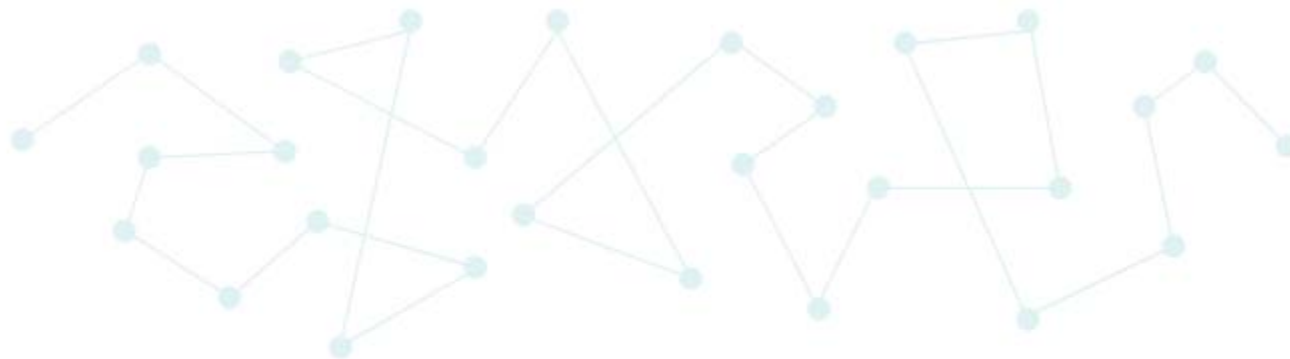
HTTP低效

- 重复
- 浪费

IPFS概况

- 全称: The InterPlanetary File System (星际文件系统)
- 由Juan Benet在2013.12开始发起, 属于Protocol Labs
- IPFS已经在线上运行
- firefox/chrome支持IPFS: IPFS Companion
- 商业化: filecoin还在开发中

目标



IPFS aims to replace HTTP and
build a better web for all of us.

IPFS技术

- 要点
- 技术栈
- 数据角度

要点

- Versioned File-版本化文件
- Content Addressed-内容寻址
- P2P File System-P2P文件系统

技术栈

applications



web

naming



SFS

merkledag



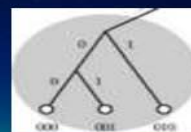
git

exchange



BitTorrent®

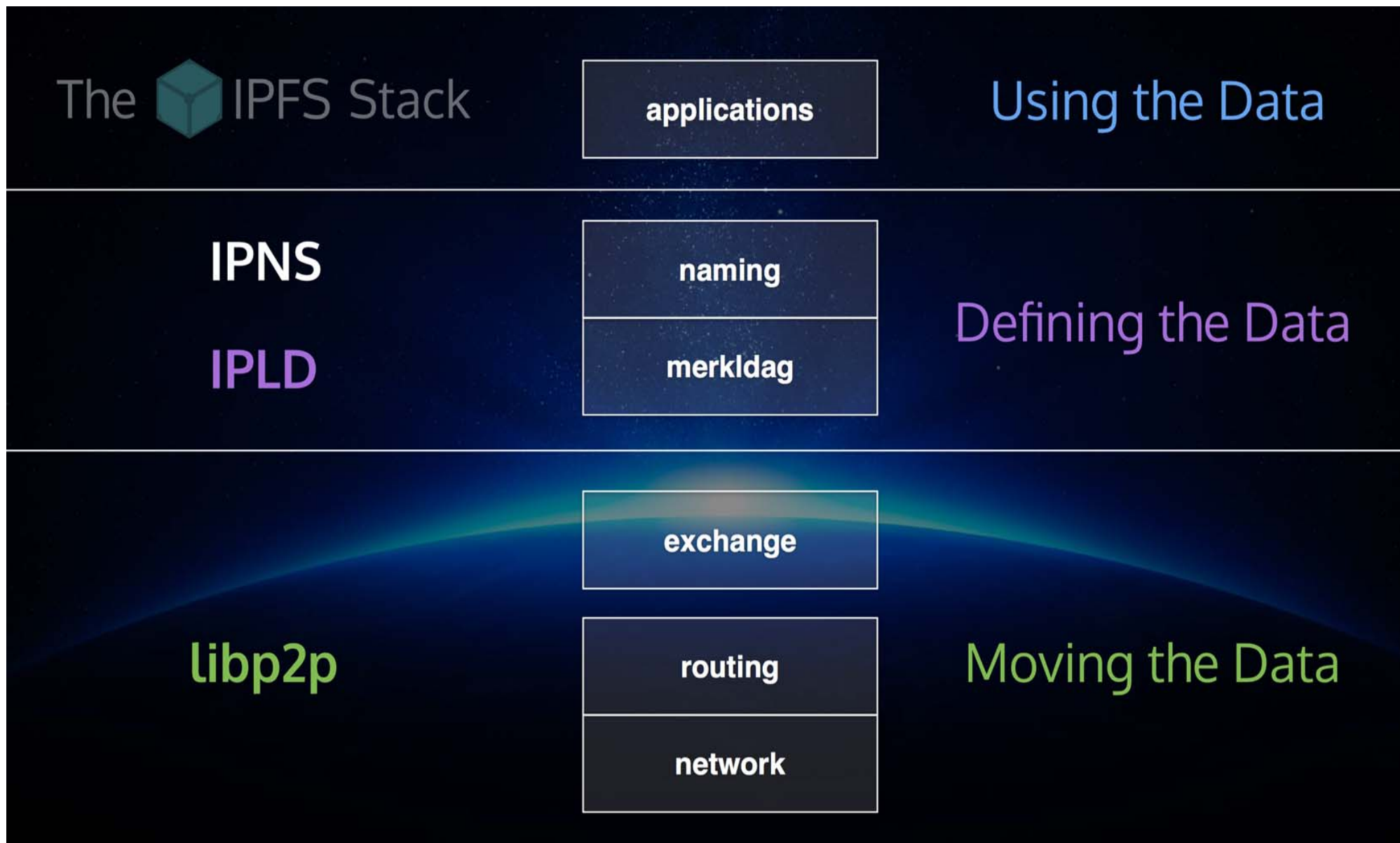
routing



DHT

network

数据角度



IPFS优势

- Faster
- Safer
- Distribute
- Permanent
- Open
- Low-cost
- Transport independence
- Dataformat independence
- Connection robustness

IPFS应用

区块链存储方案

- 与ETH,ETC集成

全球统一命名空间的文件系统

- IPFS(不可变)
- IPNS(可变)

个人文件系统

- 除了git之外另一个选择
- 版本管理, 发布, 备份, 更新, 权限控制

CDN

- IPFS版本的迅雷网心

Web application

- <https://d.tube/>
- <https://ipfs.io/>
- 更多

[List of IPFS websites](https://www.reddit.com/r/ipfs/comments/63ev6h/list_of_ipfs_websites/) (https://www.reddit.com/r/ipfs/comments/63ev6h/list_of_ipfs_websites/)

数据库

orbit-db (<https://github.com/orbitdb/orbit-db>)

IPFS未来

- 下一代互联网基础

欢迎交流，一起进步

参考

IPFS白皮书 (<https://ipfs.io/ipfs/QmR7GSQM93Cx5eAg6a6yRzNde1FQv7uL6X1o4k7zrja3LX/ipfs.draft3.pdf>)

HTTP is obsolete. It's time for the Distributed Web (<https://blog.neocities.org/blog/2015/09/08/its-time-for-the-distributed-web.html>)

IPFS – Content Addressed, Versioned, P2P File System (<https://blog.acolyer.org/2015/10/05/ipfs-content-addressed-versioned-p2p-file-system>)

An Introduction to IPFS (<https://medium.com/@ConsenSys/an-introduction-to-ipfs-9bba4860abd0>)

HTTP is obsolete. It's time for the Distributed Web (<https://ipfs.io/ipfs/QmNhFjJGcMPqpuYfxL62WB9528NXqDNMFxiqN5bgFYiZ1/its-time-for-the-permanent-web.html>)

awesome-ipfs (<https://github.com/ipfs/awesome-ipfs>)

Thank you

沉风

myself659@163.com (mailto:myself659@163.com)

<https://blog.ipds.top>

