# IPFS

* 身份标识
  + 内容寻址的方式
* 网络
  + 传输
  + 可靠性
  + 可连接性
  + 数据完整性
  + 身份认证
* 路由
  + 找到其他节点的地址
  + 找到可以提供指定数据的节点
* 交易
  + 激励节点缓存更多的数据，即使节点自身并不使用那些数据
* 对象

Object Merkle DAG: 通过密码学哈希的方式将对象相互关联起来

* 内容寻址
* 抗篡改
* 去重

需求

* 列出对象中与其他对象的引用关系
* 根据路径查找对应的数据
* 递归方式解析路径上的各个对象
* 文件
* 对象命名

IPFS 使用场景

* As a mounted global file system
* As a mounted personal sync folder
* As an encrypted file for data sharing system
* As a versioned package manager for all software
* As the root file system of a Virtual Machine
* As the bool file system of a VM (under a hypervisor)
* As a database: applications can be write directly to the Merkle DAG data model and get all the versioning, caching, and distribution IPFS provides.
* As a linked (and encrypted) communication platform
* As an integrity checked CDN for large files
* As an encrypted CDN
* On Webpages, as a web CDN
* As a new permanent Web where links do not die