lab10 - Research #13

Research IPFS

21.09.2016 15:04 - didi

Status:	In Progress	
Priority:	Normal	
Assignee:		

Description

IPFS stands for *interplanetary file system*.
It's quite similar to Bittorrent, but designed and implemented from scratch and with some advanced features added.
The most important added features probably are:

- DHT (instead of Trackers)
- Merkle Tree (instead of list in torrent file. Combined with the chunking of files, allows automatic deduplication of data on chunk level. Both are proposed as draft extensions to Bittorrent (claims Wikipedia). The auto-scaling is quite similar to Bittorrent automatically seeding a file being downloaded. To pin a file is the same as keeping to seed a file after download.

The main point to do it from scratch instead of modernizing Bittorrent was probably to avoid legacy and (backward) compatibility issues.

IPFS was designed with an additional incentive layer in mind (named *Filecoin*), but that's not yet ready.
Also see #23.

Related issues:

Related to lab10 - Research #23: Reseach Ethereum's SWARM and compare with IPFS	**In Progress**

History

#1 - 21.09.2016 15:06 - didi

Set up on @ipfs.d10r.net@.

Installed according to "this":https://ipfs.io/docs/install/ and "this":https://ipfs.io/docs/getting-started/ instructions.
Configured as autostarted systemd service like described "here":https://github.com/ipfs/examples/blob/master/examples/init/README.md#systemd.

Port 4001 forwarded on h1.d10r.net.

Using autossh (configured in @.ssh/config@) in order to tunnel to the Web Console.

#2 - 21.09.2016 23:56 - didi

Also tried https://github.com/davidar/ipfs-maps (tiles from "here":http://osm2vectortiles.org/downloads/) but can't yet make much sense of it (how to set it up such that it's not an isolated mirror, but rather part of an OSM CDN?)

#3 - 22.09.2016 00:04 - didi

@ipfs stats bw@ for bandwidth stats

#4 - 08.11.2016 02:00 - didi

Played some more, resulting in https://github.com/d10r/ipfs-cdn

#5 - 08.11.2016 23:16 - didi

Serverless OpenStreetMap: https://ipfs.io/ipfs/QmNUFNQXWVzbhePhj6bscW6TPu5azraCpbejbNY9zyfFjo
IPFS Archives project: https://github.com/ipfs/archives (not active in recent months)
pincoop: https://github.com/VictorBjelkholm/pincoop - attempt to build an interface for easily managing what to pin, stale project

#6 - 22.12.2016 20:47 - didi

- Tracker changed from Support to Research

- Project changed from Lab to lab10

- Description updated

- Status changed from New to In Progress

#7 - 22.12.2016 20:47 - didi

- Related to Research #23: Reseach Ethereum's SWARM and compare with IPFS added

#8 - 30.12.2016 19:59 - didi

- Description updated