Comparing Hybrid Peer-To-Peer Networks with Pure Peer-To-Peer Networks.

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Goals

Spotify is a music-on-demand streaming service that has gained a lot of popularity since it launched in October 2008. During the early days of the music streaming service, Spotify used a combined server-client and peer-to-peer network architecture to provide a low-latency service for its users while saving money on server bandwidth. Since then, Spotify has grown quite a lot, and has moved away from this hybrid model in favor for a more traditional client-server architecture.

This sort of network that incorporates the best features of peer-to-peer network architectures with the performance, reliability and security of server-client network architectures are called hybrid peer-to-peer networks.

The goal of this paper is to compare such a hybrid peer-to-peer network with a "pure" peer-to-peer network like Gnutella to highlight any advantages or drawbacks.

Following this the paper will explore the implementation of a hybrid peer-to-peer network for a chat application.

Timeline

Week	**Task**
Week 1 -2	Read and research the different architecture types
Week 3 - 4	Write report for comparison.
Week 5 – 6	Research and implement hybrid P2P chat application

Deliverables

- Final Report
- Source code for hybrid P2P chat application
- Website/logbook

Related Works

- The Case for a Hybrid P2P Search Infrastructure. Boon Thau Loo, Tyan Huebsch, Ion Stoica, Joseph M Hellerstein (https://pdos.csail.mit.edu/archive/iris-demo/IPTPS-04_Boon_Thau_Loo_and_Ryan_Huebsch_and_Ion_Stoica_and_Joseph_M._Hellerstein_The_Case_for_a_Hybrid_P2P_Search_Infrastructure.pdf)
- Comparing Hybrid Peer-to-Peer Systems. Beverly Yang, Hector Garcia-Molina (http://ilpubs.stanford.edu/455/1/2000-35.pdf)
- Spotify - Combining Cache, Peer-To-Peer and Server-Client Architectures for Users' Satisfaction. Gordan Pejchinovski (https://www.researchgate.net/publication/260281013_Spotify_-_Combining_Cache_Peer-To-Peer_and_Server-Client_Architectures_for_Users'_Satisfaction)